Evidence Processing and Instruction Manual

#03008

LYNN PEAVEY COMPANY

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LYNN PEAVEY COMPANY

Evidence Processing and Instruction Manual
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SAFETY

The reader is advised to utilize appropriate work practices when handling the chemicals and solvents used in latent fingerprint development. Safety work practices include the use of personal protective equipment (gloves, laboratory coats, eye protection, etc.), engineering controls (use of ventilation hoods and proper ventilation) and work practice controls (washing hands, no eating or drinking).

The reader of the manual should take responsibility to obtain education concerning the types of chemicals used, the hazard(s) which these chemicals may impose, and the procedures and work practice necessary to prevent exposure. This information is readily available from the **Material Safety Data Sheets (MSDS)** and the labels affixed to the chemicals. MSDS sheets are available upon request.

The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with these products.

Other Information

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1,2-INDANEDIONE

Item # 06013 **Instruction # 60158**

Revised: 05/12/08

Directions for the use of 1,2-Indanedione to develop latent prints

1,2-Indanedione can be used as an effective tool to develop fingerprints off of porous surfaces. 1,2-Indanedione can be used in place of DFO and in many cases has developed more identifiable fingerprints than DFO.

1,2-Indanedione is not intended for use on pour-quality papers such as newspaper, cardboard or recycled paper.

1,2-Indanedione can be used with thermal paper.

Preparation of a working solution

1. Mix in the following order:

2 g	1,2-Indanedione
70 ml	Ethyl acetate
930 ml	HFE 7100

Procedure of Use

1. Dip, spray or wash the item in the reagent.

2. Air-dry the item (3 minutes).

3. Oven bake at 100 degrees C for 10 – 20 minutes at 60% relative humidity or with no added humidity.

4. View under a forensic light source:

   For most papers……..
   View @ 515 nm (green light) with orange barrier filter.

   For manila, brown paper bags, cardboard items and craft paper…….
   View @ 515 – 570 nm with orange or red barrier filters.

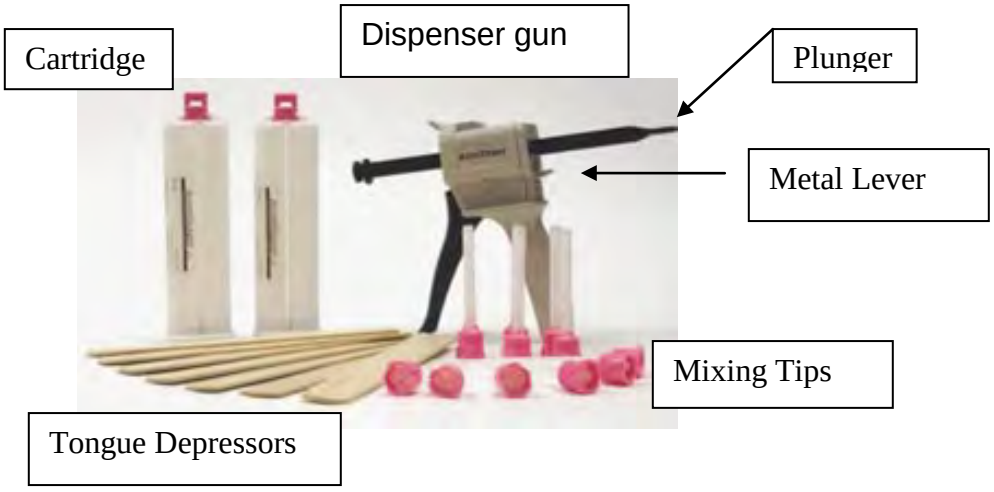
   OPTION:
5. Spray lightly with Zinc chloride, and/or cool the treated item with liquid Nitrogen. View with forensic light source.

AccuTrans Basic Kit

Item # 40055 / 40059 / 40078 **Instruction #60125**

Revised: 1-17-07

To insert the plunger into the dispenser gun, push the metal lever at the rear to insert the plunger.
Insert a 75 ml double cartridge into the gun with the notch side down.
Put on the special mixing tip.
Squeeze the trigger. The compound will come out through the mixing tip that is laced with veins to mix the two compounds. When it comes out, the compound is thoroughly mixed.
When using the transparent polyvinylsiloxane keep the mixing tip in the transparent polyvinylsiloxane as it comes out of the mixing tip will eliminate the chance of air bubbles.
When using the brown or white polyvinylsiloxane which has a heavier viscosity, apply it directly to the area you want to cast and use the tip to stir the compound to remove any air bubbles that may be trapped. You can also use the tongue depressor to spread out the product.
Polyvinylsiloxane dries in a relatively short time depending on the air and surface temperature.
Your cast with the AccuTrans polyvinylsiloxane will produce very fine detail casting or lift.



Re-Order form on back.

AccuTrans Basic Kit

Re-order Form

Department Name: _____
Attention: _____
Shipping Address: _____
City: _____ State: _____ Zip: _____
Telephone Number: ( ) _____
Authorization Signature: _____
Purchase Order Number: _____

Item Number	Quant.	Description	Call for prices
40055		Basic Kit (Transparent)	
40059		Basic Kit (White)	
40058		Dispenser Gun	
40057		Mixing Tips (40 pack)	
40054		Transparent Accutrans Cartridge	
40052		White Accutrans Cartridge	
40053		Brown Accutrans Cartridge	
40056		Spreader Tip package	
59362		Tongue Depressors (20)	

AccuTrans Cartridge Refills

Item # 40075/40076/ 40077 **Instruction #60173**

Revised: 12-2-10

Instructions for Use (English)

ACCUTRANS® Automix Casting Silicone

Description
AccuTrans Casting Silicone is a low-viscosity, thixotropic elastic impression compound for taking accurate impressions on smooth, textured or rough surfaces. AccuTrans is ideal for lifting fingerprints as well as for taking long-lasting impressions of toolmarks, firing pins, cartridge casings, etc. AccuTrans can also be used for other industrial applications.

Type of Material
Polyvinylsiloxane

AccuTrans automix
AccuTrans AB / AccuTrans AB Ice
Base: brown
Catalyst: light grey

AccuTrans AW
Base: white
Catalyst: light grey

AccuTrans AT
Base: transparent
Catalyst: transparent

AccuTransGrey
Base: grey
Catalyst: light grey

Areas of Application
last, precise surface impression taking with long-term stability for microscopic evaluation and documentation.

Guide Numbers AccuTrans

Temperature °C / °F	WT *min*	ST *min*
-10 / 14	12	32
0 / 32	6	16
10 / 50	3	8
20 / 68	1:30	4
30 / 86	0:45	2

Guide Numbers AccuTrans Ice

Temperature °C / °F	WT *min*	ST *min*
-10 / 14	2	8
0 / 32	1	4
10 / 50	0:30	2
20 / 68	0:15	1
30 / 86	0:08	0:30
40 / 104	0:04	0:15

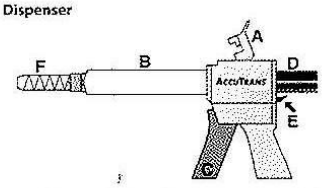
WT =working time, SZ = setting time

The working time depends on the ambient temperature. The lower the temperature, the slower the material sets, and the higher the temperature, the faster the setting time. The following general rule applies:

- A temperature increase of 10 °C / 18 °F halves the working and setting time
- A temperature decrease of 10 °C / 18 °F doubles the working and setting time

Potential Danger
Polyvinylsiloxanes show excellent biocompatibility. So far there are no known harmful side effects or interactions for the user.

Dispenser



Use of System 75 Cartridge (also see illustration)
1. Push the release lever (E) upward and at the same time pull back the slidebar (D) as far as it will go.
2. The locking flap (A) open, insert the cartridge (B) downward into the dispenser's guiding grooves with the notch and close the locking flap again. Push the slidebar to the front until you notice a resistance.

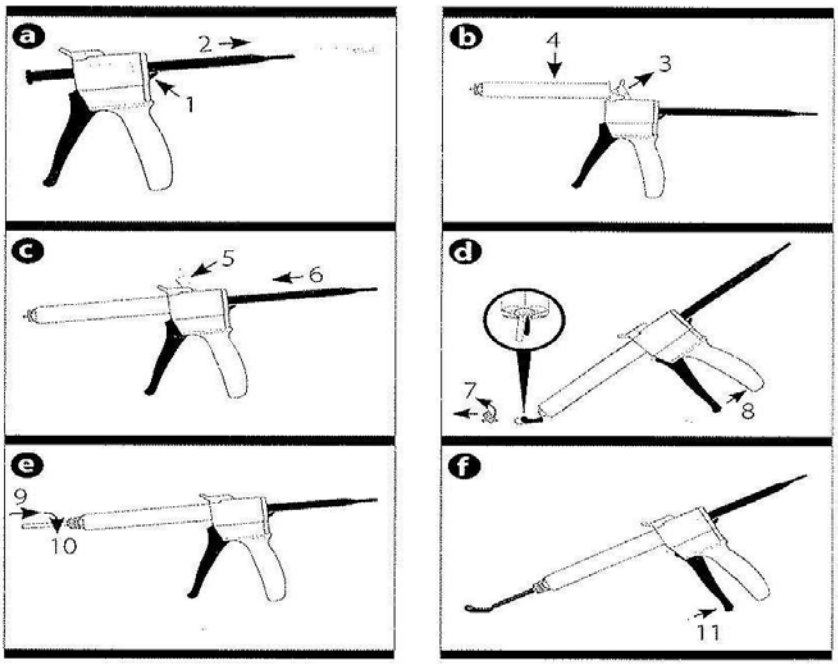
Mixing
3. Remove the cover cap of the cartridge.
4. The first time you use a cartridge, press the trigger (C) and squeeze out a little material onto a paper towel until the base and catalyst come steadily out of the opening. This ensures that the plungers are at the same height and an optimal mixture is achieved. Wipe off the cartridge openings with paper towels.
5. Place the mixing tip (F) on the cartridge opening (follow guide) and fasten with a quarter clockwise rotation.
   Extrude the casting silicone by steadily pressing the trigger (C). Avoid abrupt movements. Releasing the trigger (C) stops the material flow. **Keep tip in the material while extruding to prevent air bubbles and voids.**
   Do not remove the mixing tip after use! The mixing tip is used as a cover cap until the next use and prevents contamination of the material.
6. **Reusing the Cartridge:** Loosen the used mixing tip by turning it counter clockwise and then remove it. Put a new mixing tip on and fasten by a quarter clockwise turn (90°). The dispenser is ready for use.

Removing the Cartridge
7. Push the release lever (E) upwards and at the same time pull back the slidebar (D) as far as it will go.
8. Open the locking flap (A) and remove the cartridge.
9. When covering a large area, dispense the material next to the image to be transferred, making sure enough material has been dispensed to cover the entire area. ALWAYS keep the mixing tip in the dispensed material to avoid bubbles and voids. Once the material has been dispensed, use a spatula to spread the material in one direction to smooth the surface of the material. Let the material cure for the allotted time before removal. (See enclosed pictogram.)

Note
Acidic, alkaline and sulfurous compounds (e.g. skin secretions, latex gloves and surfaces contaminated by latex gloves) can influence or prevent curing of polyvinylsiloxanes.

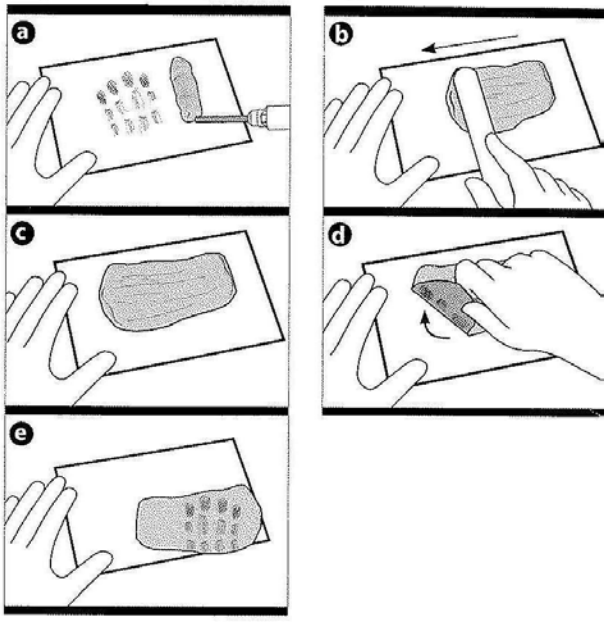
Shelf Life and Storage
Expiration date and batch numbers are printed on the cartridge labels. Store at 15–23 °C / 59–73 °F away from heat and sunlight. Impressions should be stored at room temperature.

ACCUTRANS® AutoMix



ACCUTRANS® AutoMix

Use of large areas



AMIDO BLACK

Item # 05085 **Instruction #00020**
Revised: 08/19/04

Directions for the use of Amido Black (naphthalene black)
to develop blood-stained latent prints

Amido Black can be used as an effective tool to develop fingerprints that were left behind when bloody friction skin touched a crime-scene object. Amido black contains a dye that reacts with the protein present in blood and turns it a highly visible, blue-black color. This chemical will not react with normal, non-bloodstained fingerprints - so it must be used in conjunction with other latent-fingerprint processing techniques. It is also important to remember that samples of the blood stains should be taken for typing *before* using Amido Black.

Preparation of a working solution

1. You will need three different solutions in order to properly use the Amido Black procedure:

Solution 1 is prepared by combining the following ingredients and stirring well for about 30 minutes with a magnetic stirrer to make sure the ingredients have properly entered into solution:

2 g of Amido Black (naphthalene 12B)
100 ml of glacial acetic acid
900 ml of methanol

Solution 2 is prepared by combining the following ingredients:

100 ml of glacial acetic acid
900 ml of methanol

Solution 3 consists of the following ingredient by itself:

1000 ml distilled water

Procedure for Use

1. Before beginning the Amido Black procedure, make sure that visible fingerprints have been properly recorded and photographed.

2. The first procedural step is to fix or stabilize the blood by soaking the object to be studied in methanol for one hour.

3. After the blood has been stabilized, totally immerse the object in Solution 1 (Amido Black/glacial acetic acid/methanol) for about two or three minutes - or until the latent prints become visible.

4. Put the object in a tray containing solution 2 (glacial acetic acid/methanol) and move it back and forth to wash off excess dye.

5. Put the object in a tray containing solution 3 (distilled water) and rinse it for a few minutes to remove all traces of excess chemical.

6. Set the object aside and allow it to dry at room temperature.

7. Photograph the fingerprints developed in this procedure.

8. After finishing the photography, secure the object in a kraft evidence bag. Label the bag and add the necessary documentation. Seal the bag with tamper indicating evidence tape and submit the evidence to the lab for analysis.

Other Information

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BASIC YELLOW

Item # 06019 **Instruction #00018**
Revised: 8/16/04

Directions for using Basic Yellow
to fluoresce latent fingerprints
after fuming items with Super Glue.

Basic Yellow is a solution that is typically used as a bath for latent prints that have been developed with Super Glue (cyanoacrylate). A working solution of Basic Yellow can be used to dye the Super Glue residue that adheres to latent fingerprints on an item being studied. Ideal for use on leathers and plastic after they have been Super Glued. View developed latent fingerprint with an alternate light source such as the Blue Light Special. Latent prints fluoresce brightly, and weakly developed latent prints that could not be seen under normal viewing conditions may be easily seen and photographed.

Preparation of a working solution

1. Mix a stock solution using the following formula:
   2 g of Basic Yellow
   1000 ml of reagent alcohol

2. Combine the ingredients in amber bottle. Stir until totally dissolved.

Procedure for use

1. Super Glue item of evidence.

2. Photograph any visible prints.

3. There are several ways to apply Basic Yellow to the item of evidence.
   A. Pour enough solution into container to submerge item.
   B. Pour the Basic Yellow solution over the item.

4. Allow the Basic Yellow solution to remain on the item for approximately one minute.

5. Allow item to air dry.

6. View item after it has dried with an alternate light source or with an ultraviolet light.

7. Photograph any visible prints.

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BattleLite Forensic Light

Item # 56031
Revised: 12-2-10

BattleLite™ Forensic Light Source

The 3-watt BattleLite™ has a removable head that is set at 455nm, and with the orange goggles will easily illuminate body fluids, trace, and fluorescent powdered fingerprints in all lighting conditions. Tactical in size at less than 5 1/4" long and comes with a hi-lo switch and diffuser lens (to use if desired). Included in this kit is a white head that converts the light source into a tactical light with extreme brightness.

The BattleLite™ has at least 2-3 times the output, as other ALS light sources, more variable control and features military-grade rugged construction that are dust, shock and weather resistant. The BattleLite™ uses two lithium ion CR123 batteries.

The BattleLite™ Kit (includes the turbo-charged 455nm light source head, white light head, diffuser lens, goggles, 2 sets of lithium ion batteries, and tactical carrying case.)

The BattleLite™ is easy to use.

To install batteries unscrew end cap and insert the two lithium ion batteries positive end in first.

Insert batteries positive end first

The on/off switch is located on the end of the light body. Push for on and push to turn off.

End cap
On / Off switch

The Blue 455 nm screws onto the front of the light body. The Blue and White heads are easily switched out.

Screw head into body

Just behind the light head is the Intensity switch which allows you the option for a softer beam if the fluorescents are too bright.

When using the light source you will need to wear the orange goggles to see the items that are fluorescing such as semen, saliva and urine.

There is also a diffuser lens cover that will soften the light when placed over the light head.

Blue Light Special™ Kit

Item # 05651, #56511, #05652, #56521, #05653 #56531, #05654, #56541

Instruction #01117

Revised: 02/04/05

The Blue Special™ is designed to be used in as dark an area as possible. Any outside (external) light will cause the results to be diminished.

The Blue Light Special is engineered to fit snugly over a Maglite™ or Streamlight™ flashlight. Inset the end with the deepest section onto the front of your flashlight. You will find inserted in your unit a sponge-like Grip-Strip™ that should secure your unit to the head of your flashlight. Simply take the Blue Light Special in one hand, the flashlight in the other and insert the flashlight head at an angle so that the bottom part of the flashlight comes into contact with the Grip-Strip™. Press down on the flashlight head to compress the Grip-Strip foam, then tilt the flashlight so that the entire head of the flashlight is surrounded by the Grip-Strip. Then, gently work the Blue Light Special from side to side until the Grip-Strip seal is all the way seated.

To remove, simply work the Blue Light Special in a back and forth motion, while pulling on the flashlight gently.

IMPORTANT: Any other method for assembling or disassembling the Blue Light Special may result in damage to the Grip-Strip seal. It is supposed to fit snugly. Do not try to push the Blue Light Special straight on to the flashlight. An extra piece of Grip-Strip has been included if your piece shows any wear after use.

The K-42 viewing shield surface should be kept clean from dust and prints by using a non-abrasive cleaner. We have included lens cleaner and a soft cloth to help keep the lenses clean.

The K-42 viewing shield attaches to the top of your Blue Light Special unit. Push the prongs attached to the shield into the sleeve attached to the unit. To extract the shield, push in on both sides and pull out. The viewing shield has been especially angled at a 15-degree angle for the comfort of being able to view while holding your flashlight.

Blue Light Ultra™

Item # 04800, #04807 **Instruction #01116**

Revised: 02/04/05

The Blue Light Ultra™ has been designed to use as a powerful, versatile alternate light source, or as a blinding searchlight. This unit, like all forensic light sources, is meant to be used in as dark an area as possible. Any outside (external) light will cause the results to be diminished. The Blue Light Ultra has a one million-candlepower halogen bulb that is activated with a pull of the trigger. This power will enable you to enhance the fluorescence of evidence. The excitation filter is precisely calibrated (once the spotlight is activated) to transmit light waves within the 395-505 nanometer range, with the majority of the waves peaking at 440 nm. This is known to be the ideal range for general crime scene searches. On the inside of the Blue Light Ultra housing, there is a special parabolic reflector/thermal insulating blanket that reflects the light waves back through the excitation filter, while at the same time preventing heat build up. A micro fan has been retrofitted to the Blue Light Ultra housing to prevent the housing from overheating. This fan plugs into the light housing itself, so once the trigger is activated, the light and the fan will operate.

The Blue Light Ultra has an orange colored band pass filter that is included with each unit. To attach the orange filter to the housing, firmly push the ball and socket joint (the black plastic fitting) together until if firmly seats. You are now able to tilt the band pass filter (viewing shield) at an angle to suit your needs. To remove the shield, simply tilt it all the way forward, and the entire unit "breaks away."

The Blue Light Ultra housing is attached to the light source by retaining clips. To remove the housing, place a ballpoint pen directly in one of the clip nuts, firmly press in until the clip nut is fully retracted from the hole, then slip the housing off. **IMPORTANT: Be sure and remove the fan plug first before you attempt to remove the housing.** To reattach the housing, simply place one of the clip nuts into one of the holes provided, then press in the other nut with your finger, while pressing in, slide the rest of the housing on until it snaps into place. **Be sure both clip nuts are within the holes provided before using the unit.** This removable feature enables you to use your Blue Light Ultra as a spotlight or as a forensic light source.

A threaded tripod adapter comes standard with the Blue Light Ultra.

BODY PRINT and EVIDENCE KIT

Item # 01910 **Instruction # 00035**
Revised: 09/14/04

Directions for the use of Body Print and Evidence Kit

This kit is designed to facilitate the processing of cadavers for trace and fingerprint evidence. A good portion of the kit is expendable (e.g., backing card, gloves, trace lifters, temperature monitors, tape, biohazard labels, evidence labels and pocket warmers.)

1. Disposable temperature monitors should be applied to areas of the cadaver suspected of having been touched and are going to be processed. Place the temperature monitor in an area which had the least chance of being directly handled adjacent to the suspected area. Leave the monitor in place during the processing and record the temperature during the transfer/lifting process.

2. A transfer/lift medium is defined as anything used to transfer the fingerprint residue from the surface of the skin to the medium itself; such as backing card, glass laminate, non-adhesive side of trace lifter, copy paper.

3. Place a temperature monitor on the reverse side of the transfer/lifting medium and record the temperature of the medium when applied to the skin surface. Surface temperature of the transfer/lifting medium should be 90°F for best results.

4. A fan (included) may be used to lower the surface temperature of the skin. Hold the fan approximately 3" above the surface of the skin to cool. This process will lower the temperature of the skin approximately 7°F.

5. The pocket warmer may be used to raise the temperature of the transfer / lifting medium. Follow manufacturer's instructions to avoid injury.

6. When using transfer/lifting mediums follow this rule of thumb: if the surface of the skin feels warm, use cool transfer/lifting medium and conversely, if the surface of the skin feels cold, use a warm transfer lift medium.

7. Apply direct transfer/lift mediums over the suspect area of the skin with light to medium pressure for approximately 5 seconds and then remove. Make two lifts of each suspect area.

8. Using the foam pad on the back side of flexible transfer/lifting medium will provide even distribution of pressure to the surface of the skin and reduce the inadvertent destruction of possible fingerprint evidence.

9. Transfer/lifting mediums may be processed with regular brush and powder after allowing them to air for at least 20 minutes to allow excess moisture to dissipate.

10. The application of the 3" x 5" laminated glass to a suspected area where print may be located is done in a similar manner, without the use of the foam pad. If the lift is negative, the glass may be wiped clean and used again. If ridge detail is apparent, photograph as soon as possible. In addition to photography the glass may be super glued to fix the print prior to processing with fingerprint powder and brush. The print on the glass is fragile compared to other transfer/lifting mediums.

11. Suspected areas of the skin may be processed with magnetic applicator and magnetic powder. (Surface temperature of the skin should be at least 75°F with a proportionate ambient temperature.) All fingerprints, which are developed on the skin, should be photographed in place before lifting.

12. Fingerprint tape and gel lifters may be used to lift developed fingerprint evidence from human skin. Lifted prints may be affixed to latent backing cards. Complete the reverse side of the latent backing card with your initials, badge number, case number, date and what portion of the body the print was lifted from.

13. All developed fingerprints lifted with gel lifters should be photographed due to their tendencies to not store well and to react adversely to heat.

14. The trace lifter may be removed from its protective film and placed adhesive side to the foam pad. Gloves must be worn to prevent inadvertent fingerprints being left on the smooth side of the tape. Place the transfer/lifting medium (trace lifting tape) attached to the foam pad over the suspected area with light to medium pressure for five seconds. Remove the transfer/lifting medium from the surface of the skin and allow to air dry for approximately 20 minutes. Remove tape from the foam pad, place on backing card and process with the magnetic applicator and powder.

15. If the transfer/lifting medium is contaminated by biological fluids affix a Biohazard label to the medium and place into a plastic bag or pouch and seal. An alternate method would be to seal the medium with a trace lifter and affix warning seal.

The information contained herein is believed to be accurate. However, no warranty or representation regarding the application of this information is expressed or implied. The Lynn Peavey Company and the author assume no responsibility for the use or misuse of any of the techniques, chemicals, procedures, methods or ideas described herein resulting in injury and/or damage to person or property.

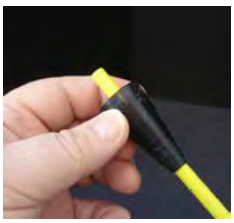
Notice of copyright February 1998/wcs

BULLET TRAJECTORY KIT

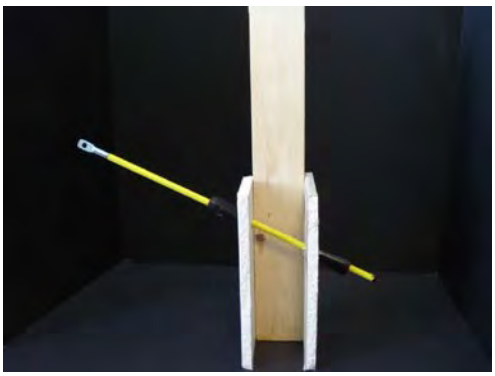
Item # 95237 **Instruction # 60159**
Revised: 12-2-10

Bullet Trajectory Kit

Thank you for purchasing the Pathfinder LT. This manual will provide you with directions for the safe and efficient operation of our Pathfinder Laser Trajectory Kit.
Laser Projection affords an easy and accurate method of determining bullet trajectories at the crime scene.
The Pathfinder LT functions by attaching the laser pointer to a protrusion rod that has been inserted into a projectile hole to establish the angle and direction of the source. The Pathfinder LT can also be mounted directly onto a tripod to project the laser beam through the bullet holes.
The Pathfinder LT Kit contains four tapered spacer cones that center the protrusion rods in the bullet holes. These cones are particularly useful when the holes are angled or distorted.



1. Insert the rod through the hole in the centering cone (small end first) and gently push the rod further through the hole in the spacer cone and out through the hole.
2. Place an O-ring on the rod and slide it toward the large end of the spacer cone.
3. Place a second spacer cone over the rod and into the exit hole (small end first).
4. Once the cones are fitted carefully into the holes, place a second O-ring on the rod near the large end of the second cone.
5. Gently ease the cones snugly into the bullet holes and slide the O-rings toward each cone until they meet to fix the rod position.
6. Once the bullet path has been centered, the Laser pointer can be mounted on the protrusion rod.



The angle finder is used to measure the inclination or angle of the described bullet trajectory. Simply place the angle finder on top of the protrusion rod.
The angle or inclination can be easily read from the pointer with accuracy.

Eye connectors can be screwed onto the ends of the protrusion rod for stringing purposes.

The tripod mount has threaded holes for placement of the Laser pointer either to visualize the bullet hole or the point of origin.

Please read the following instructions carefully before using the Laser Pointer and keep the instructions on file for future reference.

This high output, quality Laser Pointer incorporates advanced laser optics and microelectronics. Failure to operate the Laser Pointer in accordance with the instructions and precautions may cause damage to this unit, property or persons.

CARE AND MAINTENANCE

- If the Laser pointer is to be stored for longer than a month without use, remove the batteries to prevent corrosion.
- Do not expose the laser pointer to extreme temperatures below 32°F or above 110°F.
- Do not submerge the laser pointer in water or expose it to moist conditions.
- Like all electronic equipment, the pointer should be handled with care. Do not drop the laser pointer or subject it to stress as this will cause damage to the unit.
- Remember that the laser device can be harmful if used improperly. Refer to the safety precautions.
- The laser pointer carries a limited warranty. If a failure occurs, DO NOT try to operate the laser unit. Doing so will void the warranty. (This laser pointer contains no user serviceable parts).

SAFETY PRECAUTIONS

- The Laser Pointer emits an output power that is less than 5mW. It is a Class IIIA Laser according to CDRH standards.
- Since a laser beam **can be harmful** to the eyes. avoid direct eye exposure. **Do not** look directly into the laser beam output aperture during operation.

CAUTION: Use of controls, adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Installing the Batteries:

- Your Laser Pointer uses two AAA batteries. We **strongly recommend** alkaline batteries for longer battery life.

- To change the batteries: unscrew the set screw at the base. Install the batteries with the negative (-) pole of the **battery inserted first.** Then replace the set screw.

Laser Pointer Warranty:

Any defect in materials and workmanship for 90 days. If your Laser is defective and returned within 30 days after the date it was purchased, we will replace it at no charge.

For further safety information regarding lasers, refer to ANSI-Z136.1 STANDARD FOR THE SAFE USE OF LASERS, available from the Laser Institute of America.
(407) 380-1553

Cast-n-Pitch™

Item # 95020
Revised: 10/11/04

Instruction #60016

Disposable Casting Frame

Contents: **4 - Cast-n-Pitch frames**
2 - Clips

Photograph the tire or footwear impression before casting it. Set the dimensions you need before you pour your casting material.

The disposable Cast-n-Pitch frame is 3" tall and 96" long. The casting frame is usually 2" longer and 2" wider than the impression you are going to cast.

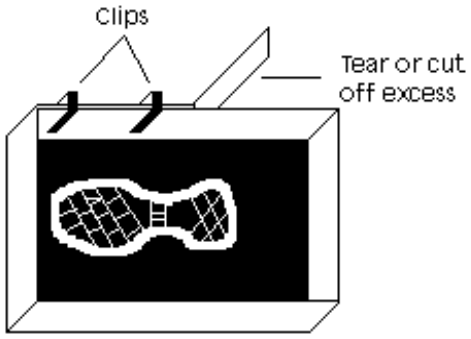
Make your first bend of the Cast-n-Pitch frame at the length of the cast you want to pour. Make the second bend at the width of the cast you want to pour. The third bend is the length on the other side and fourth bend is the width on the opposite end. Make the final bend to lap over the first side and cut or tear off excess Cast-n-Pitch frame for future use.

Secure the Cast-n-Pitch frames end with the enclosed clips

Mix your casting material per the instructions of the casting material you have.

Pour the casting material into the frame. Do not pour directly onto the impression you are trying to cast. Pour the casting material to the side of the impression and allow it to flow into the impression.

Allow time to set up. Remove clips and place back into Cast-n- Pitch kit to use with remaining disposable frames. Allow the cast to cure before cleaning it up.



CIT™ KIT

Item # 40040
Revised: 12/28/04

Instruction #60045

(Csi In Training)

WARNING: Due to possible staining from fingerprint powder, adult supervision is suggested.

Lifting fingerprints looks easy, but there really is a science to it. Like many things we do, you have to practice to get better. Have fun lifting fingerprints and we hope you catch your con!

Because staining can occur with fingerprint powders, we highly encourage you to use on surfaces away from carpet or nice apparel**.**

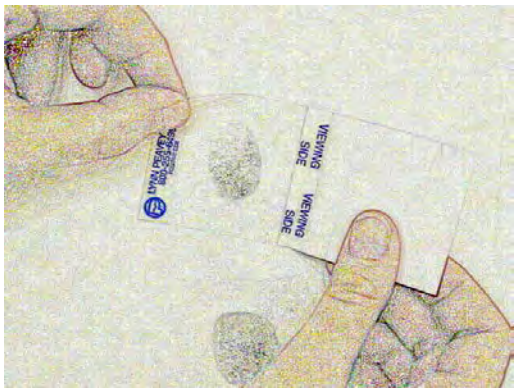
DIRECTIONS:
Every time we touch something, we leave behind a part of us and this includes your fingerprints. No two people have the same fingerprints; it belongs to only you.

1. Find a smooth surface to begin with. This could include countertop, car door, leather, or vinyl to name a few.
2. Use your fingerprints or try and search for others that have been there before you.
3. Take the Fiber Duster out of the tube and carefully open the jar of powder. You don't need much powder so use very sparingly. Put the brush into the powder and then gently tap to remove excess powder.
4. In a circular motion, gently move the brush over the surface, careful not to press too hard. You "twirl" your brush over the surface.

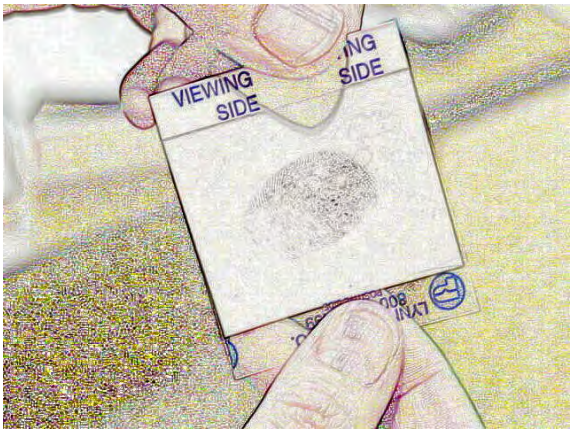
The secret to developing great prints is in the "twirl" of the brush. Keep practicing!

5. This powder shows up on light or dark surfaces. Watch for the appearance of fingerprints.

6. Take the flaplifter and peel off the clear backing to reveal a sticky tape. Press the tape against print and gently rub your finger over the print.



7. Lift the flap and put back on backing. You should have your print!



Now compare the prints you lifted with the types of fingerprint patterns on the next page.

There are many places on the internet you can learn more!
www.aafs.org
www.fingerprints.demon
www.fbi.gov
www.lynnpeavey.com
www.csigizmos.com

What Kind of Fingerprint Patterns Do You Have?

Loop

Plain Arch

Whorl

Tented Arch

Copy Cast Kit™

Item # 09707 **Instruction #00071**
Revised: 08/01/05

This kit includes the following:

(5) Five one-gallon plastic resealable bags with 2.5 pounds of casting material
(1) Measuring cup
(1) Small bottle of Hardening Solution

The Lynn Peavey Company uses a Copy Cast™ casting material, which is a superior quality model stone for casting footwear or tire track impressions. It must be noted that this casting material should be stored in a cool dry place. High temperature and humidity affect the gypsum material adversely. When mixing use cold water to increase working and setting time. To decrease setting time to make the cast set faster use warm water. Caution must be taken when pouring a cast in snow. Always use cold water.

1. If pouring a cast in very fine or loose dirt/sand---hardening the impression can be accomplished by spraying gently and evenly with the hardening solution before preparing the casting material.
2. Open the plastic bag containing the casting material and add 10oz of water. Reseal the bag and mix by kneading together until "pancake consistency" or until all the lumps of casting material have been dissolved.
3. Pour the mixture carefully into the impression as follows:
   a. Start at either end of the impression and start pouring the material on the outside of the impression.
   b. Continue pouring the material into the same area and let the mixture flow naturally into the rest of the impressions. (Continue pouring into what was already poured).
4. When the cast starts to harden, etch name, date, case number or other pertinent information into the cast. Felt marking pens can also be used.
5. Leave the cast in place until hard: this could take approximately 30-45 minutes depending on specific conditions. Lift the cast from the impression by prying up gently with a knife or stick a few inches from the edge of the cast. Do not attempt to remove the soil or clean the casted impression at this time.
6. Allow the cast to air-dry for approximately 24 hours. Clean the cast by washing with water and lightly brushing.

NOTE: This stone material does not require any reinforcement material and, in most cases, a casting form will not be necessary

Copy Cast™ Pouch

Item # 05730 **Instruction #00072**

Revised: 08/01//05

The Lynn Peavey Company uses a Copy Cast™ casting material, which is a superior quality model stone for casting footwear or tire track impressions. This casting material should be stored in a cool dry place. High temperature and humidity affect the gypsum material adversely. When mixing use cold water to increase working and setting time. To decrease setting time to make the cast set faster use warm water. Caution must be taken when pouring a cast in snow. Always use cold water. Please read the enclosed technical paper prior to preparing any cast.

If pouring a cast in very fine or loose dirt/sand---hardening the impression can be accomplished by spraying gently and evenly with a hardener (not included) before preparing the casting material.

1. Pour casting powder into a mixing container and add 24oz of water. Mix together until "pancake consistency" or until all the lumps of casting material have been dissolved.

2. Pour the mixture carefully into the impression as follows:

    c. Start at either end of the impression and start pouring the material on the outside of the impression.

    d. Continue pouring the material into the same area and let the mixture flow naturally into the rest of the impressions. (Continue pouring into what was already poured).

3. When the cast starts to harden, etch name, date, case number or other pertinent information into the cast. Marking felt pens can also be used.

4. Leave the cast in place until hard: this could take approximately 30-45 minutes depending on specific conditions. Lift the cast from the impression by prying up gently with a knife or stick a few inches from the edge of the cast. Do not attempt to remove the soil or clean.

5. Allow the cast to air-dry for approximately 24 hours. Clean the cast by washing with water and lightly brushing

NOTE: This stone material does not require any reinforcement material and, in most cases, a casting form will not be necessary.

Preparing a cast for footwear or tire tread impressions,

Dwane S. Hilderbrand
Scottsdale Police Crime Laboratory
Scottsdale, Arizona, 85258.

INTRODUCTION:

Footwear/tire tread identification is a widely accepted form of forensic identification in the identifying and/or connecting a suspect to a crime scene. Although it is the crime scene investigator's responsibility to detect, analyze, collect, and recover such evidence, few investigators do so. Footwear/tire tread impressions remain the evidence least likely to be collected

Footwear evidence can be found at almost all crime scenes in two forms-impressions and prints. The basic collection process is photograph, lift, and/or cast. Standard procedure has been to photograph three-dimensional impressions prior to casting them, and in most cases that would be sufficient for comparison, But what about the minute detail that the flash "shadows" conceals, impressions or the detail that may be present on the sides of the shoe? Are we missing impressions that can be identified? In William Eodziak's Footwear Impression Evidence, many reasons for casting the impressions are given; yet casting is still not performed routinely. It has become very selective. Almost any three-dimensional impression can be cast if there is clarity and the surface 'dill permit. In most cases, the surface will tell the investigator whether the impression can be cast or not.

Making cast of footwear impressions dates back as early as 1786 with the Richardson case in Scotland, described by Henry Robinson in his book, Science Catches the Criminal. Someone had located the body of a young girl who had been murdered. Investigators found numerous bootprints near and around the body. The investigating officer noted that the boots appeared to have been newly patched and had a lot of nail holes. The officer made crude plaster casts, later checking them against the boots of individuals that appeared at the victim's funeral. The officer successfully matched the cast of the impressions with the boots belonging to Richardson.

Historically, plaster of Paris was used for the casting of footwear/tire tread impressions, as decades passed, other substances were tested and refined. After numerous studies and testing using a new material called "dental stone", the FBI Law Enforcement Bulletin (19861 would state, "It is now recommended that only dental stone be used for casting impressions". Since this material was being extensively used by dentists in order to locate microscopic detail in the teeth, it would be of benefit in the comparison of footwear/tire tread evidence. Although many agencies still relied on plaster of Paris, dental stone became the preferred material. Dental stone proved to be much stronger and therefore did not require the reinforcement material to be placed in the cast, nor did it require a form around the impression during the pouring for strength and durability. Most importantly, because dental stone is more durable and harder than plaster of Paris, it was easier to clean in the laboratory using water or a potassium sulfate solution, with virtually no loss or erosion of detail from the surface.

NOTE: The hair spray is used only to harden very loose or fine dirt, in order to apply the casting material.

The pouring method is started to one side of the impression allowing the material to pour into what has already been poured. By pouring the mixture in this manner the flow of the mixture can be directed into the impression. The casting material is not poured directly into the impression.

The cast is allowed to set undisturbed for at least 30 minutes, after which the cast could be carefully lifted from the surface. In some cases the set up time varied from 20 minutes to 1 hour and 45 minutes. This basically depended on the environmental conditions surrounding the impression. In some incidents a small amount of potassium sulfate can be added to the mixture. This increased the set up time (caution should be used when using potassium sulfate, you don't want the mixture setting up prior to the pouring)

Once the impression has set up, a knife can be placed directly into the ground and under the cast about one inch from the cast then pry upwards. Some soil or dirt adhered to the cast, however NO attempt should be made to clean it at this time. The casts can be gently cleaned around 4-8 hours after they have been poured, but the author noticed that due to the final set up time that the casts could not be completely cleaned for up to 24 hours

CONDITIONS:

I. Footwear impressions in normal ground conditions:

   a. Setting time 20-30 minutes

II. Footwear impressions in sand (dry)

   a. Setting time 20-30 minutes
   b. Hair spray is a must to harder the sand

III. Footwear impressions in sand (wet)

   a. Setting time 30 minutes to 1 hour
   b. Sprinkle small of amount of casting material over the impression to assist in absorbing the extra water
   c. Use 1/2 ounce less water in mixing the casting material

IV. Footwear impressions in snow

   a. Setting time 1 hour 30 minutes to 2 hours
   b. Lower the temperature of the water by mixing snow with the water

V. Footwear impressions in water

a. Setting time 1 hour 45 minutes to 2 hours
b. Sprinkle small amounts of the casting material to cover the impression. Prepare a mixture of the casting material using 1/2 ounce less water.

One of the tasks crime scene investigators are reluctant to do is cast impressions. Most will tell you the task is too time consuming, too messy, and they don't know when the material is "really" ready for pouring. As the casting procedures become easier and better understood, more impressions will be cast by investigators, The following instructions will assist the reluctant investigator in becoming comfortable with routine, high-quality impression 'casting.

WHY SHOULD WE CAST?

1) The cast gives life-like and actual size molding of the original impression including uneven surfaces and depth.

2) The cast gives reproduction of microscopic characteristics.

3) In deep impressions, the cast gives reproduction of characteristics of the side of the outsoles and midsoles of the shoe, which are usually not reproduced in photographs.

4) Focus or scale problems are eliminated.

5) Provides tangible three-dimensional evidence.

6) Backs-up the photographs

7) Depth can be measured and determined

Copy Cast Casting Material

2.5 pounds of casting material
(1) One gallon zip lock plastic bag per cast
10 ounces of water

MIXING PROCEDURES

The 2.5 pounds of casting material comes in a (l) gallon resealable plastic bag. Add 10 ounces of water and mix by meshing together until "pancake batter[11] consistency is obtained or until all the lumps of material have been dissolved

Notes.

1) Warm water causes the casting material to set faster. Do not use warm water when pouring a cast into a snow impression. Proper mixing procedures for snow is to add a sufficient amount of snow to the water in order to reduce the temperature of the water.
2) No additional water is needed

POURING

Before pouring the mixture onto the impression, a thin layer of hair spray can be very carefully sprayed over the impression. This will assist in hardening the impression before pouring the material. Using a pump hair spray, a thin coating is sprayed over the impression so that the entire impression is covered (aerosol spray allows too much forced air and will likely destroy detail in the impression). Once this is completed the casting material is poured over the impression. By using the plastic bag technique there is very little mess and no cleans up.

CASTING IN WATER:

PROCEDURE:

Place a form around the impression, making sure the frame is large enough to come above the water line. Be careful not to place the form so close to the impression that it risks distorting it. Remove any debris from the surface of the water. Lightly sprinkle the stone material over. The area of the impression, about one (1) inch, allowing it to settle. Prepare a mixture of stone that is slightly thicker. Place the mixture into the frame by scooping. Allow 60 to 90 minutes for drying. Remove and air-dry 48 hours.

CASTING IN SNOW:

PROCEDURE:

Placing a form around the impression is not a necessity. Spray "Snow Print Wax" over the impression and allow it to set up for about 10 minutes. If "Snow Print Wax" is not available, a gray or black primer spray can be used, but the pouring must be done very carefully. Prepare a mixture of stone using very cold water by adding the surrounding snow to the water. This will allow the temperature of the water to become as close to the snow as possible. Four the stone material onto the impression very carefully. Cover the impression with a box and allow the cast to dry between 60-120 minutes. Remove and air-dry for 48 hours.

_ IMPRESSION MEDIA AND CASTING PROCEDURES

Media	Casting Procedures
WET SOIL of a fine, even consistency will produce an impression with a high degree of detail.	1. Sprinkle a small amount of casting material over the impression to absorb excess water. 2. Mix and pour as normal 3. Accelerator may be needed 4. Drying time 45-60 minutes.
MUD of a fine, even consistency will produce an impression with a high degree of detail.	1. Mix and pour as normal 2. Drying depends on how wet the mud is, 45-60 minutes.
DRY SOIL of a consistency of talcum powder will retain detail to varying degree.	1. Spray impression with pump hair spray. 2. Spray paint can be used to harden and highlight the impression. 3. Mix and pour as normal 4. Drying time 20-30 minutes
DRY SOIL of a consistency of hard packed will retain amount of detail to varying degree.	1. Spray impression with pump hair spray 2. Mix and pour as normal 3. Drying time 20-30 minutes
SAND will vary in texture and consistency, and will retail detail	1. Spray impression with pump hair spray. 2. Spray paint can be used to harden and highlight the impression. 3. Mix and pour as normal 4. Drying time 20-30 minutes
WHEN IMPRESSION IS IN WATER: **WATER** varies in texture and consistency. Detail depends on the amount of water and the amount of pressure applied to the ground. Time consuming process.	1. Build form around impression, if needed to control water. 2. Removed excess water if possible. 3. Sprinkle small amount or casting material over impression until covered. 4. Mix and pour as normal. 5. Accelerator can be added. 6. Drying will vary from 60-120 minutes

WHEN WATER IS IN THE IMPRESSION: **WATER** varies in texture and consistency. Detail depends on the amount of pressure applied to the impression by the water.	1. Sprinkle small amount of casting material over the impression until covered. 2. Mix and pour as normal. 3. Accelerator can be added. 4. Drying time will vary from 60-90 minutes depending on amount of water.
SNOW varies in texture, cohesiveness, and impression detail retention with temperature. Excellent detail can be reproduce with care.	1. Use Snow Print Wax" if possible 2. Spray impression with black or gray spray paint. 3. Mix water and surrounding snow together in order to lower the temperature or the water. 4. Accelerator can be added. 5. Pour as normal. 6. Drying time will vary from 60-90 minutes and maybe longer. Depends on outside temperature.

REFERENCES:

BODZIAK, WILLIAM, Footwear Impression Evidence, Elsevier Science Publishing Co., Inc., 1990

FBI LAW ENFORCEMENT BULLETIN, 1986

HAMM, ERNEST D, , Track Identification, An Historical Overview, article presented at the International Symposium of the Forensic Aspects of Footwear and Tire Impression Evidence, June 27; 1994

HILDERBRAND, DWANE S., Tecbniques in creating a cast, article presented at 79th International Association for Identification Conference, Phoenix, Arizona, July 1994.

Further information was supplied by the following companies:

EMDIN International Corporation, Arcadia, California

EVI-PAQ, Tucson, Arizona

GARRECO INCORPORATED, Heber Springs, Arkansas

MILLS CORPORATION, Indiana

WHIP MIX CORPORATION, Louisville, Kentucky

DFO

Item # 06017, #06018 **Instruction # 00016**
Revised: 08/04/04

Directions for the use of
DFO (1,8-DIAZAFLUOREN-9-ONE)
to develop latent prints

DFO is a Ninhydrin analogue, which reacts with amino acids in fingerprints causing them to fluoresce. Use on porous surfaces such as paper, cardboard, raw wood and sheet rock paper. DFO on papers develops 2.5 times more latent prints than Ninhydrin alone.
Not suitable for items that have been wet. Must be used before NINHYDRIN, SILVER NITRATE and PHYSICAL DEVELOPER. The use of an alternate light source is required since this is a fluorescing process. Photograph prints to document.
Can interfere with examinations for handwriting, body fluids, trace evidence and most other forensic examinations.

Preparation of a stock solution

0.5 gram DFO
100 ml Methanol
100 ml Ethyl Acetate
20 ml Acetic Acid

1. Measure and mix these solvents under a fume hood.
   Dissolve 0.5 gram of DFO powder in 100 ml of methanol.

2. When the powder is dissolved, add 100 ml of ethyl acetate.

3. When it is thoroughly mixed, add 20 ml of acetic acid.

4. Store this solution in a dark brown glass or polypropylene bottle.

Preparation of a working solution

One Liter
220 ml DFO stock solution
780 ml Petroleum Ether

1. Measure and mix these solvents under a fume hood. **Do not mix this solution until you are ready to use it.**

Note: for best results, do not use any working solution that is older than two to three weeks.
2. If a liter (1000 ml) of working solution is needed, it takes the entire 220 ml of stock solution and add 780 ml of petroleum ether, mixing thoroughly.

3. If less working solution is desired, halve or quarter the solutions accordingly.

Procedure for Use

1. The paper specimen should be dipped into the solution for ten seconds and allowed to dry for about three minutes. This step should be repeated, as two applications and dryings seem to be better than one application.

   Note: Due to the health hazards it is not recommended to spray this solution.

2. Heat is then applied in an oven. While expensive chemical ovens can be used, a regular household toaster oven will work. The specimen should be heated for ten minutes at 100° C (212° F). View the paper item under a forensic light source or laser.

3. As an alternative, a hair dryer or dry iron will work. If using one of these alternative heat sources, place a thick towel or other protective material on the counter first. Then, place a few paper towels on it, the paper evidence goes next and a few more paper towels on top of that. Apply dry heat to the surface for several minutes. A dry iron can be placed directly on top of the paper towels and used the same as when ironing clothes. It is possible to stop ironing to check the progress with a forensic light and, if the latent prints are not very bright, continue to iron for a few minutes longer. Sometimes this added heating time will improve resulting print development. The DFO-developed latent prints may or may not be visible to the naked eye, but should be viewed under a forensic light source or laser.

4. View under a forensic light source at 495 nm to 550 nm.

5. Photograph results using an orange colored or 550 (BP 35) bandpass filter.

Other Information

The information contained in this product bulletin is the most accurate and up-to-date information available at the time of publication. The procedures and directions notes are believed to be correct, but this bulletin does not claim to be all-inclusive. It should be used only as a guide to normal use.

The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with this product.

DFO with Novec HFE-7100

Revised: 03/07/05

Mixing instructions for working solution of DFO with Novec Engineered Fluid HFE-7100.

Important: Before mixing products, please read the current Material Safety Data Sheets (MSDS) and precautionary information on the product packages. Follow all applicable directions and precautions.

When measuring, transferring or dissolving components of the mixture, we recommend using indirect, vented chemical splash goggles to protect eyes from contact and natural rubber or polyvinylchloride gloves to prevent skin contact. Discard and reglove if components or mixture actually contact the gloves.

Use adequate ventilation and appropriate respiratory protection when mixing products. See MSDS for products being mixed for additional information

Use the procedure described below, substituting the proper amount of each component for your respective working solution batch size.

	Standard Formulation	Sample Formulation
DFO	0.25 g	0.05 g
Laboratory grade methanol	40 ml	8 ml
Laboratory grade glacial acetic acid	20 ml	4 ml
Novec fluid HFE-7100	940 ml	200 ml

1. In a 250 ml beaker, dissolve 0.25 grams DFO in 40 ml methanol.
2. Add 20 ml acetic acid.
3. Continue mixing until all the DFO has dissolved in solution.
4. Transfer this “stock solution” to a one liter beaker.
5. Stir in 940 ml of Novec fluid HFE-7100.

6. Cover and allow solution to settle for approximately 30 minutes. A thin, oily-looking film may form on the top of the solution. This film consists of water, excess methanol and DFO and must be removed prior to use. This oily film can be removed by any of the following procedures:
   a. If available, process the working solution through a **separatory funnel**. Again, allow the solution to settle for at least 30 minutes. Drain the bottom phase into a squirt bottle or storage container. Stop draining when the separate, clear-looking solution nears the bottom of the funnel, or approximately 50-100 ml of solution remains in the funnel. This remaining solution should be discarded in a proper waste container for flammable solvents as it consists of undissolved ethanol, water and DFO.

   b. If a separatory funnel is not available, use a **pipette** to skim the oily film from the top, again discarding the waste in a proper waste receptacle.
   c. If neither a separatory funnel nor pipette is available, simply transfer the solution into a **squirt bottle.** This will help insure a clean solution. When the solution level is below the straw in the squirt bottle, discard the remaining solution in a proper waste receptacle.
7. When not is use, protect from direct light to preserve the shelf life of the solution.

OTHER INFORMATION

The information contained in this product bulletin is the most accurate and up-to-date information available at the time of publication. The procedures and directions notes are believed to be correct-but this bulletin does not purport to be all-inclusive. It should only be used as a guide to normal use.

The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with this product.

DiamondLite™ Diffuser

Item # 20034
Revised: 09/24/04

Instruction #60110

Slide DiamondLite™ diffuser over the end of the Mag-Lite™ inserting each side one at a time. By adding downward pressure against the cushion, the diffuser will easily slide onto the end of the light. Remove and store in bag provided.

DIFF-Lift™

Item # 08200 **Instruction #60050**

Revised: 05/15/2009

Directions for the use of DIFF-Lift tape to lift latent prints from textured surfaces

Step 1 Fold a flap on the end of the tape approximately ¼ inch wide. (This will insure not leaving prints on the adhesive side of tape.) (see **Fig 1 and 2**).

Fig 1

Fig 2

Fig 3

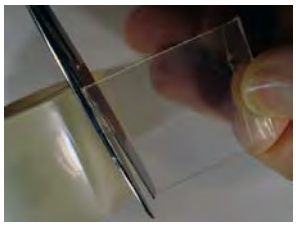


Fig 4

Hold tape at folded tab use only enough tape to cover the latent print (**Fig 3**). For example if lifting single print only use a 2in. strip of Diff-Lift tape. This tape does not tear like standard lifting tape, scissors will be required for cutting. (**Fig 4**)

Fig 5

Fig 6

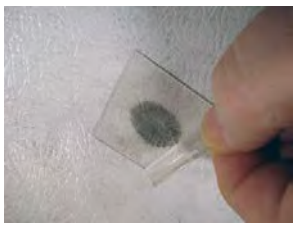


Fig 7

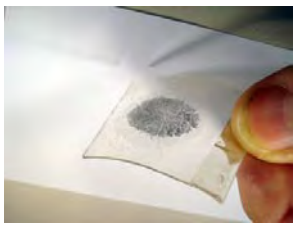


Fig 8

Step 2 Hold the tape by the tab, place the tape on top of the latent print. (**Fig 5**). Using the index finger press firmly on the print, rubbing in a circular motion, forcing the Diff Lift Tape into the textured surface.(Do not try to press all the tape down only the area with the latent print.) (**Fig 6**)

Step 3 To lift the latent fingerprint; pull up on the tab. (**Fig 7**) The lift can now be placed on a backing card. (**Fig 8**)

Note: If the Diff Lift tape is placed on a surface without the above recommended holding tab the clear backer will have the tendency to pull away from the adhesive. This can result in a non usable print.

DustBustr™

Item # 13200
Revised: 09/23/04

Instruction #60109

The DustBustr™ is designed to keep the fingerprint powder in the jar and allows for better control of the amount of powder used. The spill proof top is the key.

Instructions for Use

Remove the green top and you will see a yellow cap with a hole in the center that looks like a funnel.

Remove yellow cap and place approximately one (1) teaspoon of fingerprint powder into the container.

Replace the yellow cap by pressing until it snaps on.

You are now ready to use the DustBustr™.

Take your Fiber Duster and twirl it into the hole in the yellow cap. Once the Fiber Duster is in the cup, tap it into the powder gently to put powder on the duster.
To remove the excess powder raise the Fiber Duster up about one (1) inch off the powder and twirl the duster vigorously while it is still in the jar. By twirling the duster in the jar, it flares out, preventing any powder from coming out of the jar.

Remove the Fiber Duster from the jar and you should be able to shake it over a piece of white paper and no powder will fall off.

Now process your item for latent print. Repeat the process if you need more powder. When not in use, the Fiber Duster can lay in the grooves on the yellow cap of the DustBustr.

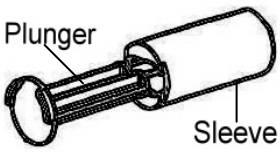
EXTRUDER GUN CONVERSION KIT

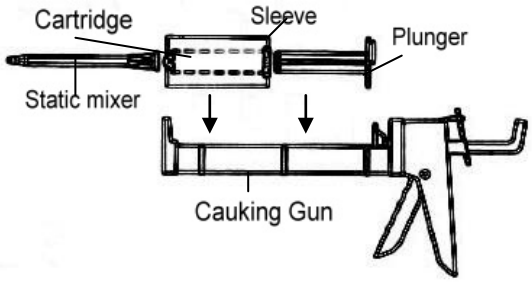
Item # 59391 **Instruction # 60010**

Revised: 09/22/04

1. Insert the two part extruder cartridge nose first, through the oval opening (this is the end with the smaller opening) of the sleeve until the cartridge flange fits snugly against the end of the sleeve.

2. Place plunger in the back end of the extruder cartridge.





3. Remove end cap from the front of the extruder cartridge and connect the static mixer to the extruder cartridge.

4. Place the assembled conversion kit, with mixer and extruder cartridge, in a caulking gun as shown in the above diagram. Use this as you would use the extruder gun.

5. When finished using the unit, remove and discard the static mixer and place end cap back on the extruder cartridge. Your kit is ready for the next time you need it.

Extruder Gun Kit

Item # 05936
Revised: 03/05/05

Instruction #00065

Gun assembly

Lift the cartridge holder up, insert the black plunger with the notches on the bottom, push up on the metal release lever at the rear of the handle while pushing the plunger completely in. See fig. 1.

Insert the cartridge by sliding it down in the slotted area where the plunger was inserted. Push down the cartridge holder to lock the cartridge in place. See fig. 2.

Remove the cap on the cartridge and retain to seal the cartridge when finished. Attach the mixing tip by twisting on. Squeeze trigger to dispense the cartridge contents.

Fig. 1

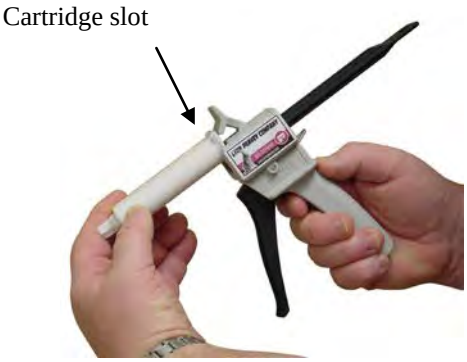


Fig. 2

Fingerprint Powder Processing: Powders • Applicators • Application

Revised: 03/07/05

In searching a crime scene, or potential pieces of evidence, the most common item that you search for is latent fingerprints. Being "latent", the prints are, by definition, not readily visible to the naked eye.

As crime scene investigators or evidence technicians, you have to process the evidence for latents with powders or chemicals. You can develop the latent to the point where you can easily visualize, photograph and/or lift them from the surface for the record.

Powders:

There are many types of powders available for processing, such as regular fingerprint powders, magnetic fingerprint powders and fluorescent fingerprint powders. When selecting a powder, it is best to select a color that is in contract to the surface on which it is being processed.

Regular fingerprint powders come in various colors such as black, gray, white dual-use, red and super black. Regular powders may be used on any surface that is relatively smooth and non-tacky.

Magnetic fingerprint powders come in various colors such as black, gray, white and dual-use. Magnetic powders are sometimes more effective on rough, grained or porous surfaces, which could become heavily coated with regular powder.

Fluorescent fingerprint powders come in various colors such as red, yellow, green and orange, with fluorescent magnetic powders available in red and yellow. Fluorescent powders are very strongly fluorescent, and can be detected with a low power UV lamp or an alternate light sources. This is a very fine powder and is effective on multicolored surfaces, which can present a contrast problem.

Applicators:

Fiber Dusters are best used with regular fingerprint powders. Use one brush for each color of powder; do not contaminate the brush by using it in various colors of powder.

Feather Dusters are primarily used with fluorescent powders, but also work well with regular powders. Again, use one brush for each color of powder.

Magnetic applicators, such as the regular pen type, Bubble-based or the Mega-Mag applicator are used with the regular magnetic and the fluorescent magnetic powders.

Lifting/Backing materials:

Lifting tapes come in various sizes from 1 ½" to 4" in frosted and clear.

Flap lifters come in various sizes and have the clear lifting tape attached to a backing card in either white, black or clear.

Backing cards come is various sizes and in the black or white. Use a color of card to the contrast of the powder being used.

Application:

Processing steps with regular fingerprint powders:

1. Photograph any visible fingerprints that you observe.
2. Carefully dip the brush into the appropriate powder. Apply a small amount of powder on the tip of the brush.
3. Apply the powder to the surface with a light twirling motion over the area to be processed. If a heavy deposit appears on a fingerprint, gently brush off the excess powder with a light twirling motion.
4. Photograph any latent fingerprints that have been developed.
5. Apply a short piece of lifting tape. This must be pressed well onto the surface.
6. Slowly remove the lifting tape from the surface and place it on a backing card that is of contrasting color to the powder being used.
7. Properly fill out the back of the backing card with the proper information.

Processing with magnetic powders:

1. Place the end of the magnetic applicator that you have chosen to use into the magnetic powder and withdraw, shaking lightly to remove any excess powder. A ball of magnetic powder will have formed, making a "brush-like" appearance at the base.
2. Gently move the ball of magnetic powder over the surface to be processed being careful not to let the head of the applicator touch the surface being processed, as this could scratch the latent fingerprint. Continue until you have developed the latent print.
3. Upon completion, hold the magnetic applicator over the powder jar and lift the rod in the center of the applicator to release the powder back into the powder jar.
4. Pass the clean applicator over the area just processed to pick up any excess powder.
5. Photograph any latent fingerprints that have been developed.
6. Apply a short piece of lifting tape. This must be pressed well onto the surface.

7. Slowly remove the lifting tape from the surface and place it on a backing card that is of contrasting color to the powder being used.
8. Properly fill out the back of the backing card with the proper information.

Processing with fluorescent powders:

1. Photograph any visible fingerprints that you observe.
2. Carefully dip the tip of the feather duster into the appropriate color of fluorescent powder. Apply only a small amount of powder on the tip of the brush.
3. Apply the powder to the surface with a light twirling motion over the area to be processed. If a heavy deposit appears on a fingerprint, gently brush off the excess powder with a light twirling motion.
4. For optimum visibility, use a portable light source or and alternate light source to view the fluorescent fingerprints.
5. Photograph any latent fingerprints that have been develop using a portable light source or and alternate light source.
6. Apply a short piece of lifting tape. This must be pressed well onto the surface.
7. Slowly remove the lifting tape from the surface and place it on a black backing card.
8. Properly fill out the back of the backing card. A notation should be made that this card contains a fluorescent lift and that you may need a light source for optimum viewing.

Forensic Star™

Item # 95197
Revised: 01/31/06

Instruction #60117

The Forensic Star™ offers a cost-effective and technically feasible method to evaluate the spatial relationship between forensic measurement scales and evidence.

ADVANTAGES:

- Use of # 09952 L-scale ABFO #2 rule.
- Free-standing allows a clearer field for photography.
- Retained with the evidence.
- Allows for evaluation of depth by developing a reproducible "Z" –axis.

REQUIREMENTS:

- 2 L-scale ABFO #2 rule (Item # 09952)
- 1 Forensic Star™

INSTRUCTIONS:

Both L-scales are placed in the grooves of the Forensic Star™ at a 90° to each other. Place the star in close proximity of the evidence. And photograph.

Fuminator

Item # 06403, #06503
Revised: 02/08/05

Instruction #01118

GENERAL INFORMATION

The Fuminator cartridges from the Lynn Peavey Company use the vapors from heated cyanoacrylate (the chemical in Super Glue™) to find and develop hardened, white latent prints.

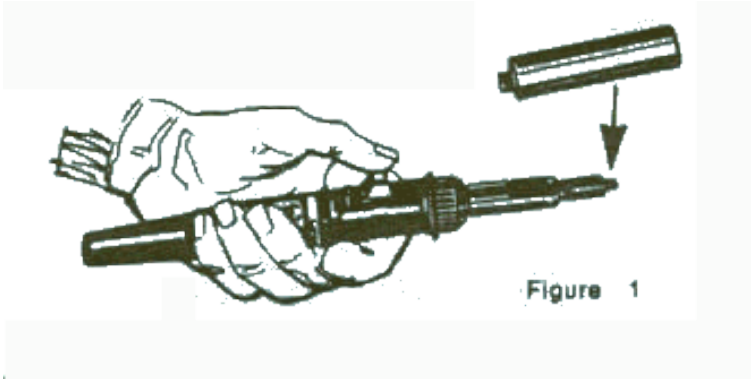
The Fuminator cartridge contains a pre-measured amount of polymerized cyanoacrylate, with no dyes or colorants. The resulting fumes will almost instantly "lock" the print to the evidence surface and prepare it for further processing methods (photography, fingerprint powder, dye staining, etc.). The prints that develop with this method will be very durable, almost permanent, depending on the residue that the fingerprint left behind.

The cartridge should give off vapors for up to 25 minutes and more depending on the heat setting you use. Simply fume the evidence, and then shut the wand off. You will still have whatever remaining time left on your partially used cartridge.

The Fuminator cartridges do not have special handling or storage requirements, will not leak or spill and they have an indefinite shelf life. Extreme care needs to be exercised, as the unit remains very hot after use.

OPERATING INSTRUCTIONS

Place Fuminator cartridge over the entire end tip of the Lynn Peavey Company fuming wand. The smaller, protruding tube should be pointing towards your fuming wand. (See figure 1).



Ignite the fuming wand and keep the control lever setting on "high" (5). Fuming should begin to start as soon as the cartridge heats up, within 1-2 minutes. CAUTION: Occasionally, you may find a cartridge that, for initial fuming, "blows out" ore from the ends. Keep the control setting on high, and within a couple of minutes, the unit should heat up enough to send the fumes out toward the tip.

To receive maximum fuming time, once you start getting a noticeable stream of fumes from the Fuminator, lower your control lever to the lowest setting. Once the fume volume has dramatically dropped off, you may wish to turn the control lever up or even on high. (Usually not until 15-20 minutes of continuous fuming has passed.)

When finished fuming, let the Fuminator completely cool off before attempting to put it back in the package. When the cartridge is completely spent, let it cool, and then dispose in any trash receptacle.

OPERATING TECHNIQUE FOR DEVELOPING LATENT FINGERPRINTS

Fuming in Open Areas

If you have an item that needs to be fumed, and you are in an area that has relatively still air (little to no wind), you can use the Fuminator without using a closed fuming chamber. What your main focus should be is to make sure that the area to be fumed comes in contact with the vapor stream, but not too close. Here is where practice comes into play. Hold the fuming wand (with the Fuminator) approximately 4-8 inches from the area to be fumed. The vapor steam should rise, so therefore, aim the Fuminator below the area to be fumed. You do not want to have the Fuminator tip close enough to heat the evidence surface, because the heat could be enough to dry up any remaining moisture in the latent print, leaving you with a lower chance of print development. CAUTION: Holding the wand too close (and for too long in one place) will result in over development. Holding the wand too far away and moving it around erratically can result in underdevelopment. Practice is the key!

Normally, one is going to move the wand in slow, even movements, letting the prints develop gradually. You should see some sort of development with 30 seconds to a couple of minutes, but beware-sometimes the prints are very hard to see at first glance. If you do not see anything, try moving the item to direct sunlight or use strong side lighting. If in doubt, have your crime lab take a look.

If you plan on trying your Fuminator out in windy conditions, you will probably have to improvise a method for maintaining the steady vapor stream coming into contact with the evidence surface. A cardboard box, 2-liter plastic bottle, a plastic bag and some duct tape all can work.

Fuming in a Fuming Chamber

This is the standard, and preferred, method because you do not have to worry about the wind, plus you can control the humidity. Humidity is often times important for re-hydrating the latent prints, especially for suspected older prints, or those exposed to dry environments.

Our exclusive Fold-A-Lab™, which is a portable acrylic fuming chamber that folds flat and assembles in seconds, has the hole cut in the side with a cork for inserting the Fuminator. Call for details.

If you suspect that you are in a dry area, or if your relative humidity is less than 60% (a function depending on weather), then place a small cup of warm to hot water in the bottom of your tank. A coffee cup, Styrofoam cup, etc. will work fine. This will re-hydrate your evidence and generally develop a whiter, more visually identifiable latent print. CAUTION: Practice with this first. Over development and over hydration can possibly occur.

Position your evidence within the chamber, then fill the tank with fumes. Shut your fuming wand off and cork the opening. Allow the evidence to be exposed to the fumes for 5-10 minutes. Open the tank, allow to ventilate, then check your evidence. If you do not get the results you would like, keep on trying. It should only take the Fuminator about 30 seconds on high power to fill your tank depending on the size of your tank. You might try putting one of your own prints on the inside of the tank and when you detect your print has developed, you can usually assume the prints on the evidence have developed, as well.

Fuming Rooms and Vehicles
Fuming a room or vehicle is similar to the fuming chamber method, only much larger. Repeat all the steps specified before, allowing for more fumes and time. On a vehicle, for example, make sure all vents and windows are closed. Lower one window just enough to fit the Fuminator cartridge, then begin fuming. When an adequate amount of fumes have been dispensed (usually 5-8 minutes on high), shut the wand off, then seal the partially opened window with masking tape. Wait at least 15-20 minutes, completely ventilate the interior, and then inspect for prints. It might help to place a test print on the interior to monitor the development process.

Cleanup Procedures
Deposited vapors can sometimes be cleaned off with hot soapy water, solvents or careful brushing. All methods could do harm to the evidence surface.

Safety Precautions
The Fuminator cartridges were designed and intended for use only by law enforcement officers trained in the collection of evidence at crime scenes. Improper use of these cartridges and system can cause serious physical injury.

Use in a well-ventilated area. If ventilation in not available or adequate, wear a NIOSH approved organic vapor mask equipped with a dust pre-filter. Respiratory protection is required for all confined spaces where adequate ventilation or fresh air cannot be provided. Respiratory protection should be worn by users of this product during the heating of the cyanoacrylate adhesive. Avoid inhalation of vapors. Avoid eye and skin contact.

Contact with the hot wand or cartridge should be avoided to prevent burns. Allow wand/cartridge to return to room temperature before storage, use or disposal. Do not use in areas where flammable or explosive vapors may exist.

Keep out of reach of children.

SUGGESTED FIRST AID: Eye Contact: Flush eye with large amounts of water. Get immediate medical attention. Skin Contact: Immediately wash with soap and water. If symptoms persist, contact a physician. Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

OTHER INFORMATION

The information contained in the product bulletin is the most accurate and up-to-date information available at the time of publication. The procedures and directions are believed to be correct, but this bulletin does not claim to be all-inclusive. It should only be used as a guide to normal use.

The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with this product.

FUMING HOT BOX

Item # 05595
Revised: 10/11/04

Instruction #00040

Instructions for Use

The Fuming Hot Box is used to heat super glue to create vapors to fume evidence in a closed chamber. The temperature is set at a predetermined maximum temperature. The unit comes with ten (10) reservoirs.

Place the Fuming Hot Box in your fuming chamber. Place the evidence to be processed in the chamber.

The amount of super glue used is determined by the size of the fuming chamber. Place a small amount of super glue approximately ½ cc or 5-8 drops in reservoir. You can increase or decrease the amount of super glue used depending on the chamber size and needs.

Place the reservoir with the super glue on the Fuming Hot Box and turn on to activate. Close the lid to the fuming chamber. When finished using hot box, make sure the switch is turned to the off position.

Important safeguards:

1. To protect against electrical hazards do not immerse cord, plug, or base in water or other liquid.
2. Unplug from outlet when not in use and before cleaning.
3. Do not let cord hang over the edge of table or counter, or touch hot surfaces.
4. Do not place on or near a hot gas or electric burner, or in a heated oven.
5. To disconnect turn unit off and remove plug from wall outlet.
6. Do not touch hot surfaces, Handle by plastic sides only.

Note:
This unit has a polarized plug (one blade is wider than the other). As a safety feature this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Do not attempt to defeat this safety feature.

FUMING TENT

Item # 09022
Revised: 07/26/04

Instruction #00010

1. Remove tent components from carrying case.
2. Assemble frame with the two (2) four foot sections joining together, and then insert the 4 three foot sections into the connectors. Fig. A

Fig. A

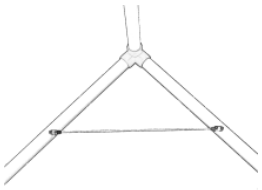


Fig. B

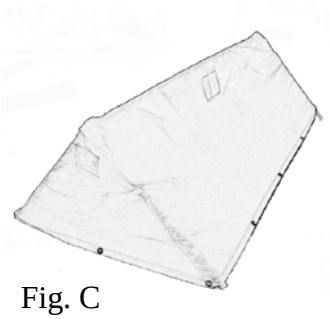


Fig. C

3. Turn legs to where the screws face the interior of the tent to prevent ripping the fabric. Fig. A
4. Place bungee cord hooks onto the screws to hold tension on legs. Fig. B
5. Place nylon tent cover over frame. Fig. C
6. Place entire set-up over subject/object.
7. Place stakes through eyelets to secure.
   Note: If using tent on asphalt use 16 penny nails or sand bags to secure, if on concrete use duct or masking tape to secure.
8. Fuming may now be performed through the flapped access hole.
   Note: Place a test print inside tent as a control that may be viewed through sight window provided. Household cooking non-stick products; such as "PAM", works well to prevent polymerized cyanoacrylate from sticking to the sight window inside the tent.
9. Coroner and investigators may enter the tent through the zippered access.
10. When fuming is complete breakdown tent and stow.
    Note: Nylon tent may be washed in clothes washer if soiled.

GENTIAN VIOLET

Item # 05101
Revised: 08/16/04

Instruction #00021

Directions for the use of Gentian Violet (Crystal Violet) to develop latent prints on adhesive tape

The Gentian Violet procedure is used to develop and recover latent fingerprints on the sticky side of adhesive tape. It works well on almost all kinds of adhesive tapes that have a viscid, rubber like adhesive: surgical tape, strip bandages cellophane tape, electrical tape, packing tape, duct tape, etc. It does not work on tapes that have a water-soluble adhesive, such as a paper packing tape.

Preparation of a working solution

1. Make a working solution using the following formula:

   1 gram of Gentian Violet powder
   1000 ml of distilled water

2. Add the Gentian Violet powder to the distilled water in a clean glass container. Mix well to assure the powder has dissolved in the distilled water.

   Note: wear latex gloves when working with Gentian Violet, as it will stain your hands.

3. Pour the solution through a filter to remove particles that did not completely dissolve. Store in a dark container to keep out of sunlight.

Procedure for Use

1. Immerse the object to be studied in the Gentian Violet solution for 15 to 60 seconds, depending on the tape and the adhesive. (If the object is too large to be immersed or dipped, the solution can be painted on using a brush.)

2. Carefully, but thoroughly, rinse the object with cold tap water to wash away any excess solution.

3. Latent fingerprints will immediately begin to appear. They will be a deep violet or blue color.

4. Allow object to dry at room temperature.

5. Photograph the fingerprints developed in this procedure.

6. To preserve the latent fingerprint, place the piece of tape on a piece of clear acetate. The latent fingerprint can be viewed through the clear acetate.

7. With black electrical tape, follow steps 1 through 3. Transfer the developed latent fingerprints to a piece of resin coated photographic paper.

Note: Gentian Violet has a strong staining action. Be careful during handling and use. To clean up spills, use liquid bleach or methanol.

Other Information

The information contained in this product bulletin is the most accurate and up-to-date information available at the time of publication. The procedures and directions notes are believed to be correct, but this bulletin does not claim to be all-inclusive. It should be used only as a guide to normal use.

The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with this product.

GOOPrint Combo Kit™

Item # 40043 **Instruction #60108**
Revised: 06/14/06

GooPrint Powder is excellent for developing latent prints on the adhesive side of tapes and labels. This Combo kit gives you the ability to develop prints on the adhesive side of both light and dark tapes.

Kit contents:
1- All Purpose Brush
48 grams GooPrint Powder
50 grams White GooPrint Powder
3.5 oz. Dispersing Solution
2- Mixing Jars
3- Mixing spoons
1- Liquid mixing bottle
2- Bulb pipettes

Mixing instructions:
In mixing jar place small amount of either White or standard GooPrint Powder depending on the tape color (2-3 spoonfuls using mixing spoons).
In liquid mixing bottle place **equal amounts** of water and Dispersing Solution using the bulb pipettes.
Gradually add the water and Dispersing Solution to the GooPrint Powder and mix with the mixing spoon until the mixture is the consistency of thin paint.

Application:
Use the all-purpose brush to paint the mixture onto the adhesive side of the tape or label.
Let the solution set on the tape or label for 10 to 15 seconds and then rinse off under running water.
Note: If the solution is left on too long, it becomes difficult to rinse off. The solution will adhere to strongly to some tapes and labels.

Photograph any developed latent prints.

GOOPrint Kit™

Item # 40035
Revised: 06/14/06

Instruction #60046

GooPrint Powder is excellent for developing latent prints on the adhesive side of tapes and labels.

Kit contents:
4- All Purpose Brush
48 grams GooPrint Powder
3.5 oz. Dispersing Solution
5- Mixing Jars
6- Mixing spoons
3- Liquid mixing bottle
4- Bulb pipettes

Mixing instructions:
In mixing jar place small amount of GooPrint Powder (2-3 spoonfuls using mixing spoons).
In liquid mixing bottle place **equal amounts** of water and Dispersing Solution using the bulb pipettes.
Gradually add the water and Dispersing Solution to the GooPrint Powder and mix with the mixing spoon until the mixture is the consistency of thin paint.

Application:
Use the all-purpose brush to paint the mixture onto the adhesive side of the tape or label.
Let the solution set on the tape or label for 10 to 15 seconds and then rinse off under running water.
Note: If the solution is left on too long, it becomes difficult to rinse off. The solution will adhere to strongly to some tapes and labels.

Photograph any developed latent prints.

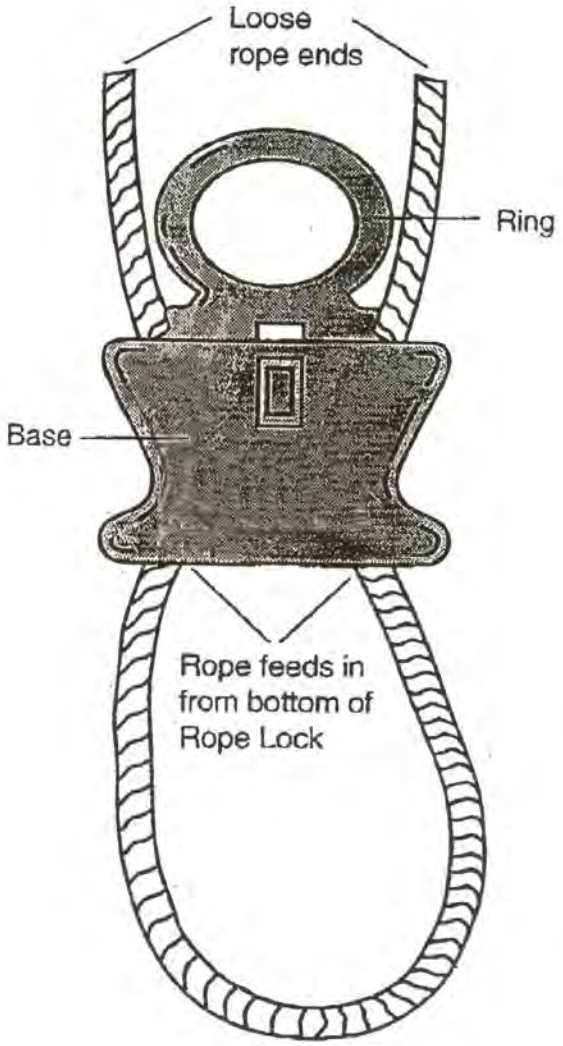
GunLock™

Item # 95004
Revised: 04/07/05

Instruction #60060

How to thread the GunLock™

1. While holding the base of the GunLock with one hand, pull out the ring ***evenly*** until locked with the other hand.
2. Insert the ends of the rope from the bottom side of the GunLock, feeding them all the way through the top.



How to tighten the rope

Hold the base of the GunLock with one hand, and pull the loose ends of the rope through the GunLock with the other hand, until the desired tension is achieved.

How to release the rope

Hold the object secured by the rope in one hand, insert finger of other hand through the ring of the GunLock, and pull the GunLock towards the loose ends of the rope.

Caution: Keep hands clear of moving mechanism.

Hexagon OBTI

Item # 15097

Revised: 11/19/10

The perfect test for confirming the presence of human blood traces.

When processing a crime scene and you have a red substance that is possibly blood but you are not sure or working with possible blood spatter in the past we could check the red substance using a presumptive test for blood which is not specific to human blood.

Hexagon OBTI is the perfect complement to determine if the red sample is human blood. This screening test rapidly verifies if the bloodstain is human blood.

Directions

A sample of the presumed human blood trace is transferred into the tube with transport medium. With the lid screwed back on, shake the sample gently inside the transport medium. This mixture is added, 2 drops, to the test in the sample well (S) at the lower end of the test. A positive sample is typically detected within 2-3 minutes. Negative results should be confirmed after 10 minutes.

Results

A single blue line means the testing liquid is working fine but no human blood has been detected. Two blue lines mean the test has detected human blood.

HotShot™

Item # 06636 **Instruction #00066**
Revised: 09/14/04

NOTE: HotShots are dated. Use the oldest HotShots in your inventory FIRST. Use your HotShots before the "USE BY DATE " on the HotShot container. Use before this date will assure the best performance. No warranty is applicable after that date.

HotShot is designed to be used in the field as well as in a fuming chamber. With any Super Glue processing method you need humidity in the chamber. HotShot supplies its own humidity for the optimum print development. Be sure to place test print in the chamber to show print development, this will serve as an indicator for other items in the fuming chamber that are being processed.

Inside the plastic container you will find the Activator packet, HotShot drum and vial of print developer.

1. Remove contents, empty activator packet into container.

2. Remove clear tab covering hole on bottom of HotShot canister.

3. Place HotShot canister into container with hole side down. DO NOT TOUCH THE DRUM. The drum will become very hot. (The plastic container will become very hot as well and should not be touched either.)

4. Empty print developer onto top of metal cap of canister, or equivalent of about 15 drops. Fumes will begin as the HotShot canister heats up. Make certain this is done in a well ventilated area or fuming chamber.

5. After fuming is complete, allow the container to cool down and dispose of contents in an appropriate manner.

6. Remember to ALWAYS put test prints in the chamber with the evidence to observe so you won't over develop the prints on the items being fumed.

CAUTION: VERY HOT once activated. Develops large quantities of fumes/steam. Fully ventilate area before entering.

IntegriSwab™

Item # 08400
Revised: 07/26/04

Instruction # 08409

1. Remove IntegriSwab, uncap and extend swab head from swab shield.
2. For dry stains, add 1-2 drops of sterile distilled water or PreZerve™ solution to cotton swab.
3. Swab to concentrate sample on the cotton swab tip.
4. Retract swab back into shield. Cap. Sample will dry completely within 24 hours.
5. Label, place in swab box, evidence seal and direct evidence to proper storage.
6. Collect controls as necessary.

IODINE FUMING STIX

Item # 05089 **Instruction # 00026**
Revised: 08/20/04

The iodine fuming technique is primarily used on hard smooth surfaces. The process is generally used on items or surfaces that would be impractical for use of standard latent brush techniques or that may contain residue.

Paper products are usually the focus of the iodine fuming techniques. There are several techniques that may be performed on paper, but it is highly recommended that the following processes be adhered to in sequential order.

1. Iodine Fuming
2. Ninhydrin
3. Silver Nitrate / Physical Developer

DO NOT BREATHE OR INHALE IODINE FUMES. THEY ARE HAZARDOUS TO MUCOUS MEMBRANES

The iodine fuming method is primarily used on greasy or paper surfaces. The iodine is absorbed at different rates by fatty or oily residue and the latent print will be visible after fuming.

1. Use the Fuming Stix by placing thumbs over the ampule in the plastic tube. Position index fingers under the tube at each end of the ampule. Bend the tube breaking the ampule to release the iodine crystals.

2. Grasp the Fuming Stix covering the iodine crystals with your hand.

3. Take a breath and hold it, then place the plastic tube in your mouth and blow.

WARNING: Do not breathe or inhale iodine fumes. **While blowing into one end of the Fuming Stix move the other end of the tube in a circular pattern around the area to be fumed. Increase the size of the circular pattern with each revolution. For best results hold the fuming end of the tube ½" to ¾" from the surface being fumed and rotate the tube end with a slow steady motion.**

4. Be sure to have sufficient ventilation when the Fuming Stix is used. Remember these fumes can be hazardous to your health.

5. Upon completion, dispose of the Fuming Stix as a biohazard item.

Liqui-Lift™

Item # #05215, #05622, #05623 **Instruction #00037**

Revised: 08/20/04

Instructions

STEP 1 – Develop your latent print with magnetic Peavey Powder and photograph.

STEP 2 – Place one drop (maybe two) of the Liqui-Lift™ solution on the powdered latent print. Use the enclosed straw to blow on the solution, to spread a think "skin" over the entire print.

STEP 3 – Allow the solution to completely dry. A blow dryer may be used, but **DO NOT** overheat!

STEP 4 – Place lifting tape over the entire print, make sure you have pressed out all air bubbles, and that the tape has made full adhesion to the surface, then lift the print slowly and carefully.

HELPFUL TIP – Always develop a test print on the same surface, so you will know when it's dry enough to make your lift.

MAIL-IN ENTOMOLOGY KIT

Item # 95046 **Instruction #60023**

Revised: 11/23/04

Collection Instructions

The following instructions are for this single case, mail-in insect collection kit and provide only minimal explanation of specimen recovery from death scenes. Procedural guides and manuals, which give detailed instructions on recognition, collection, preservation, and shipment of insect evidence, are available and should be consulted (see bibliography). In addition to these works, it is highly recommended that a hands-on training course dealing with forensic entomology be attended. This training will give the death scene investigator a greater understanding of the insects found at death scenes and the methods of their recovery. When used by investigators, who are fully trained, this kit will enhance the death scene investigation.

Observe -- Record Information.

Record the sites on and around the remains where insects are seen. This information will be the basis for collection strategy and will aid in documentation of where the different samples have been collected (specific locations e.g. large maggots -- in the grass 6 ft. southwest of remains; small maggots -- in eyes, nose, mouth; eggs -- in bloody hair on ground line; unhatched puparia -- in the soil, 3 ft north of the body). Eggs, maggots (fly larvae), and puparia (the cocoon stage of the fly), will be found on or around the body out to several feet. Adult flies will be seen flying over and around the remains and should be noted. Fast crawling beetles and beetle larvae on the ground will be observed and should be noted.

It is important to take and record temperatures at the scene.

Collection

Kit contains two types of solutions. **Solution A** is used for preservation of the adult flies, adult beetles, beetle larvae, and fly puparia (very few need preservation, keep most alive). **Solution B** is used for preservation of fly eggs and maggots (larvae).

Minimum Data on Collection Vial

Date -- (should also include time of collection)
Location -- State, County (City)
Case #
Collector

Adhesive label marked solution A and B should be filled out and placed on the appropriate vials and the matching copy label should be filled out and placed inside the vial with the specimen. Use only pencil (provided) in filling out the labels. (Ink will run or dissolve in the solutions)

Adult Insects

Using **Solution A**, fill a screw cap vial **1/3 full**. Have the vial ready when the insects are netted. For the fast flying adult flies, which will disperse very quickly, use the aerial net (purchased separately). Sweep back and forth over the remains in swift sweeping movements, then quickly trap the adults in the tail of the net by grabbing it with one hand. Most flies will attempt to crawl up the inside of the net. Hold the tail of the net up with one hand while moving the vial inside the opening of the net and trap the flies in the vial containing **Solution A**. The flies will often fly right into the vials and become trapped in the liquid. With a little practice, this technique will become very easy. For the ground crawling beetle larvae, adults, and fly puparia, place them into vials **1/3 full** of **Solution A**.

Fly Eggs and Larvae

Using **Solution B**, fill a screw cap vial **1/3 full**. Collect as many eggs or larvae as is necessary to provide an adequate specimen representation. If there are plenty of specimens (usually thousands), 25 or more specimens would be enough, but the more that are collected, the more thorough the analysis. Make separate collections from each major area where colonies are seen (there may only be one, or there may be several).

When selecting specimens, the largest maggots are most often the oldest, so make sure the largest are recovered. Of equal importance is to recover medium and smaller sized maggots so as to have a good representative sampling of the total maggot assemblage. It is likely that there are more than one species in the mix, and this will provide the possibility of finding those also. Don't forget to collect live samples from each colonization site as a companion sample (see below).

Live Specimens - Labels included

The small plastic cups are for keeping eggs, larvae, and puparia alive so as to rear them to adults. When eggs and small larvae are present, it is important to grow them to at least large larvae and hopefully to the adult stage. This is because they are very difficult to identify in the early stages. Place a 2 oz. (1X2X2 in) piece of beef liver or other fresh meat product into the cup with about 50 to 75 eggs, 25 -50 small larvae, or 15 to 35 large larvae. Cover with a moist (not soaking) piece of paper toweling to completely fill the cup so that the meat will not roll around in the cup and smash the maggots during shipping. For puparia, they do not need to eat, so place them in the cups and fill with dry paper toweling to prevent damage in shipment (no food is required for them).

Companion Samples

Make companion sample collections from the sites of colonization where fly eggs and larvae are recovered. The live specimens must be from the same sample as the preserved specimens if accurate identification is desired. Therefore, the companion samples will be 25 or more large maggots (if present) into **Solution B** and 15 - 35 **live maggots** on the meat in the plastic cup. Label the samples so it is easy to see that they are companion samples (e.g. **Solution B** -- Sa#1a, **Live** -- Sa# 1b).

Solution A

- adult flies
- adult beetles
- beetle larvae
- fly puparia

Solution B

- fly eggs
- maggots (fly larvae)

The kit box can also be used to mail the samples to be tested to the chosen testing department (from the attached list).Send vials in the pink bubble wrap bags provided along with the live samples in the collection cups, adding when necessary with paper toweling for less turbulence during mailing.

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SEND US YOUR MAGGOTS

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Names on this list do not necessarily constitute endorsement of our product, only the willingness to receive specimens from this kit. All cost associated with testing are the sole responsibility of the department and personnel requesting the evaluation.

LYNN PEAVEY COMPANY

800-255-6499

DEATH SCENE CASE STUDY FORM

CASE STUDY # _____ DATE _____
NAME _____ SEX _____ AGE _____
DATE FOUND _____ DATE REPORTED MISSING _____
LAST SEEN ALIVE _____ LOCATION FOUND _____
COUNTY CITY STATE
INVESTIGATOR _____
SITE/SCENE DESCRIPTION _____

DEATH SCENE AREA

RURAL _____
Forest _____ Tillable Field _____ Pasture _____ Brush _____
Roadside _____ Barren Area _____ Closed Building _____ Open Building _____
Other _____
URBAN/SUBURBAN _____
Closed Building _____ Open Building _____ Vacant Lot _____
Pavement _____ Trash Container _____ Other _____
AQUATIC HABITAT _____
Pond _____ Lake _____ Creek _____ Small River _____ Large River _____
Irrigation Canal _____ Marine Environment _____ Other _____
EXPOSURE _____
Open Air _____ Burial(Depth) _____ Other _____
ENCLOSED _____
Shelter _____ Plastic Bag _____ Auto _____ Other _____

COMMENTS _____

REMAINS

CLOTHED _____
Entire _____ Partial _____ Nude _____
Portion Of Body Clothed _____
STAGE OF DECOMPOSITION _____
Fresh _____ Bloat _____ Active Decay _____
Advanced Decay _____ Remains _____ Saponification _____
Comments _____
Evidence Of Scavengers _____
Trauma Contributing to Insect Activity _____

TEMPERATURES AT SCENE

Ambient _____ Body Surface _____ Ground Surface _____
Under Body Interface _____ Soil _____(10cm, 20cm depth) Maggot Mass _____
Water Temperature _____ Enclosed Structure _____ (record temperature)
(ambient, ground, soil) periodically each day at site for 2-5 days after body discovery)

WEATHER DATA OBSERVATIONS

Sun Full _____ Partly _____
Clouds Completely ____ Mostly _____ Partly _____ Scattered ____ Few _____
Rain Present _____ Past _____ Heavy _____ Lite _____
Wind Present _____ Past _____ Heavy _____ Lite _____
Snow Present _____ Past _____ Heavy _____ Lite _____
Comments

SAMPLE #1 Date: _____ **Time:** _____
HOW Aerial ____ Hand ____
LOCATION TO BODY _____

PRESERVED: _____
TYPE Maggots ____ Adult Flies ____
Beetles ____ Puparium ____

COMMENTS

SAMPLE #2 Date: _____ **Time:** _____
HOW Aerial ____ Hand ____
LOCATION TO BODY _____

PRESERVED: _____
TYPE Maggots ____ Adult Flies ____
Beetles ____ Puparium ____

COMMENTS

SAMPLE #3 Date: _____ **Time:** _____
HOW Aerial ____ Hand ____
LOCATION TO BODY _____

PRESERVED: _____
TYPE Maggots ____ Adult Flies ____
Beetles ____ Puparium ____

COMMENTS

SAMPLE #4 Date: _____ **Time:** _____
HOW Aerial ____ Hand ____
LOCATION TO BODY _____

PRESERVED: _____
TYPE Maggots ____ Adult Flies ____
Beetles ____ Puparium ____

COMMENTS

SAMPLE #5 Date: _____ **Time:** _____
HOW Aerial ____ Hand ____
LOCATION TO BODY _____

PRESERVED: _____
TYPE Maggots ____ Adult Flies ____
Beetles ____ Puparium ____

COMMENTS

SAMPLE #6 Date: _____ **Time:** _____
HOW Aerial ____ Hand ____
LOCATION TO BODY _____

PRESERVED: _____
TYPE Maggots ____ Adult Flies ____
Beetles ____ Puparium ____

COMMENTS

SAMPLE #7 Date: _____ **Time:** _____
HOW Aerial ____ Hand ____
LOCATION TO BODY _____

PRESERVED: _____
TYPE Maggots ____ Adult Flies ____
Beetles ____ Puparium ____

COMMENTS

SAMPLE #8 Date: _____ **Time:** _____
HOW Aerial ____ Hand ____
LOCATION TO BODY _____

PRESERVED: _____
TYPE Maggots ____ Adult Flies ____
Beetles ____ Puparium ____

COMMENTS

MicroBlue™/TurboBlue Kit™

Item # 95003, 95168 **Instruction #02075**
Revised: 01/12/06

Directions for the use of MicroBlue™/TurboBlue Kit™

At last an alternate light source that is small, cost effective and actually works for the detection of body fluids (semen, saliva and urine) and fluorescent powders.

Place the end of the MicroBlue through the rubber grommet in the amber shield. To use the MicroBlue turn the end cap to the right to turn on or press the end and hold to turn on. With the unit on, shine it on the object to view and look through the amber lens.

The unit is powered by 3 "AAAA" batteries and are available through most places that handle batteries.

The MicroBlue is portable and cost effective. Latent fingerprints, which are treated with fluorescent fingerprint powder, usually have more detail than the same print developed with conventional methods. The MicroBlue unit will make semen, saliva, and urine fluoresce so it can be collected and sent to the lab for analysis. It will also illuminate some fibers.

Its wavelength is absorbed by blood making the blood appear black so that it can be easily seen and photographed. In some cases, if the room or area you are examining is bright it might be necessary to dim the lights to get the best results.

The MicroBlue light source is handy to use at rape or death scenes to view the body and the scene for any evidence that cannot be seen by the naked eye. It can also be used at the hospital to scan a victim for semen stains on the body. By placing an amber lens on the camera to capture the images or shooting through the amber shield enables you to photograph these stains and prints. A basic setting for your camera using 200 ASA film is to set the aperture at 5.6 and the shutter is set for a 2 second time exposure. Use your MicroBlue as the light source for these photographs.

MicroBlue KIT-IN-A-CAN™

Item # 20000
Revised: 09/13/04

Instruction #02098

Directions for the use of MicroBlue KIT-IN-A-CAN™

Contents:
MicroBlue™ with shield
2- Feather Dusters
Powder Jet (Fluorescent Orange)
Powder Jet (Fluorescent Red)
24- 2”x2” Clear Flap Lifters
12- 2”x4” Clear Flap Lifters

At last an alternate light source that is small, cost effective and actually works for the detection of body fluids (semen, saliva and urine) and fluorescent powders.

Place the end of the MicroBlue through the rubber grommet in the amber shield. To use the MicroBlue turn the end cap to the right to turn on or press the end and hold to turn on. With the unit on, shine it on the object to view and look through the amber lens. The unit is powered by 3 "AAAA" batteries and are available through most places that handle batteries.

The MicroBle is portable and cost effective. Latent fingerprints, which are treated with fluorescent fingerprint powder, usually have more detail than the same print developed with conventional methods. The MicroBlue unit will make semen, saliva, and urine fluoresce so it can be collected and sent to the lab for analysis. It will also illuminate some fibers. The MicroBlue light source is handy to use at rape or death scenes to view the body and the scene for any evidence that cannot be seen by the naked eye. It can also be used at the hospital to scan a victim for semen stains on the body.

To use the Powder Jet turn the top nozzle to the left to open. Place your Feather Duster above the nozzle as in Figure 1 then squeeze rapidly to generate a puff of powder to cover the bottom of your Feather Duster. It will take several puffs of powder to load your Feather Duster. **Do not turn your Powder Jet upside down and squeeze** as in Figure 2.

Fig. 1

Fig. 2

Processing with fluorescent powders:

1. Photograph any visible fingerprints that you observe.
2. Load your Feather Duster using the Powder Jet as directed above.

3. Apply the powder to the surface with a light twirling motion over the area to be processed. If a heavy deposit appears on a fingerprint, gently brush off the excess powder with a light twirling motion.
4. Use the MicroBlue to view the fluorescent fingerprints.
5. Photograph any latent fingerprints that have been developed using the MicroBlue by placing an amber lens on the camera to capture the images or shooting through the amber shield enables you to photograph these prints. A basic setting for your camera using 200 ASA film is to set the aperture at 5.6 and the shutter is set for a 2 second time exposure. Use your MicroBlue as the light source for these photographs.
6. Place the tab on the powdered print, lift it and fold down on pre-attached backing card flap
7. Properly fill out the back of the backing card with the proper information. (Make sure that you indicate this card contains a fluorescent lift and that you may need a light source for optimum viewing.)

Mikrosil™

Item # 05985, #59851, #59852, #59853
Revised: 03/07/05

Mikrosil™ has been formulated to give excellent rendering of small details, highest contrast for microscopical observations, good releasing ability and short setting time. These properties are of special importance with shallow marks and marks with small details requiring large magnification. It is also suited for lifting developed latent fingerprints from textured surfaces. Select a color to contrast with the powder being used. Mikrosil™ comes in various colors: white, black, gray and brown.

Procedure for Use:

1. From the large Mikrosil tube, squeeze out approximately 1 cm onto supplied mixing card. Add approximately 1 cm of the small tube of hardener.

   Note: Discard the first inch of hardener when tube is first opened. If a large amount is needed, squeeze out equal lengths of Mikrosil and hardener.

2. Use supplied mixing sticks and thoroughly mix until a uniform color is achieved. Mixing time is approximately 1 1/2 minutes.

3. Apply the mixed Mikrosil to the tool mark or developed fingerprint, using the mixing stick. When applying to developed latent fingerprints do not allow the mixing stick to scratch the developed latent print.

4. Cut the enclosed foil to desired size. Place on a pad of paper and write identifying information (case number, date, item number, collector's initials) on the smooth side with a scribe, pen or pencil. Press the label into the Mikrosil before it sets. The information will be permanently recorded in the case by using this method.

5. Setting time:
   5-8 minutes at 68° Fahrenheit
   12-15 minutes at 14° Fahrenheit

6. The setting time can be shortened by increasing the amount of hardener or lengthened by decreasing it. Do not add more the 6% hardener.

7. Close cap tightly on both the Mikrosil and hardener when finished.

Mini-Fuminator™ Cartridge

Item # 06501 **Instruction #60000**

Revised: 08/20/04

OPERATING INSTRUCTIONS

1. Place the Mini-Fuminator cartridge over the entire end tip of your 3M or other comparable fuming wand.

2. Ignite the fuming wand as usual and keep the control lever setting on "high" (5). Fuming should begin to start as soon as the cartridge heats up - probably within 1-2 minutes.

3. To receive maximum fuming time, once you start getting a noticeable stream of fumes from the Mini-Fuminator cartridge, lower your control lever to the lowest setting. Once the fume volume has dramatically dropped off, you may wish to turn the control lever up, or even high.

4. When fuming is completed, let the Mini-Fuminator cartridge completely cool off before attempting to put it back in the package. When the cartridge is completely spent, let it cool, then dispose of in any trash receptacle.

   CAUTION: ***The Mini-Fuminator cartridge will remain VERY HOT for at least 6-7 minutes after the wand has been turned off. Use extreme care.***

Cleanup Procedures

Deposited vapors can sometimes be cleaned off with hot soapy water, solvents or careful brushing. All methods could do harm to the evidence surface. If it is an expensive car, or an heirloom quality piece, ask questions before fuming.

Safety Precaution

The Mini-Fuminator cartridges were designed and intended for use only by law enforcement officers trained in the collection of evidence at crime scenes. Improper use of these cartridges and system can cause serious physical injury. Please read this guide and Material Safety Data Sheets carefully.

Vapors during heating may cause respiratory irritation and may cause en allergic respiratory reaction. May cause eye end akin irritation. Prolonged or repeated exposure may cause an allergic skin reaction.

CONTENTS: Ethyl cyanoacrylate and Hydroquinone. Refer to MSDS.

The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with this product.

NINHYDRIN

Item # 05060 **Instruction # 00012**
Revised: 08/04/04

Directions for the proper use of a ninhydrin solution to process latent fingerprints

Ninhydrin is a widely used chemical for developing latent fingerprints on various kinds of paper, cardboard, raw wood, and plasterboard. When the amino acids in latent-print residues are exposed to ninhydrin, they react to form a purplish-blue stain. The proper concentration and formula for a useable ninhydrin spray is critical.

Ninhydrin works by reacting with amino acids and other components of perspiration residue that are present in latent fingerprints. As the chemical process progresses, a colored image of the fingerprint is produced. The development of the image is not instantaneous; however, it can be accelerated using one of the techniques in procedures for use section.

There are several formulas available for mixing a ninhydrin solution. We offer our formula, because it is non-flammable and it reduces or even eliminates the problem of ink running on paper documents.

You should store the solution in a tightly capped container in a cupboard or cabinet. At room temperature, you can keep the ninhydrin solution for approximately one year.

Procedure for Use

1. Before beginning the procedure, make sure to photograph any visible fingerprints on the object or objects being studied.
2. The procedure involves dipping objects into the solution to wet the latent fingerprints. Large objects may need to be sprayed with the solution. In some cases, it may be necessary to use a soft brush to apply the solution to the object.
3. For objects to be dipped pour the solution into a shallow pan to a depth of about 20 mm. Use forceps to dip the object into the solution for no more than 5 seconds.
4. Allow the object to dry completely at room temperature. It will only take a few seconds for the item to air dry.
5. Technique #1-Lay item on a flat surface and using a steam iron, hold the iron approximately 1" above the surface. Slowly move the iron across the item. Development should be instantaneous. Technique #2-After the item is dry, heat it in an oven for 5 minutes at a temperature of not more than 80^{o} C (176^{o} F). Do not use excessive heat.
6. Photograph the fingerprints to make a permanent record.

OTHER INFORMATION

The information contained in this product bulletin is the most accurate and up-to-date information available at the time of publication. The procedures and directions notes are believed to be correct-but this bulletin does not purport to be all-inclusive. It should be used only as a guide to normal use.

The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with this product.

NINHYDRIN CRYSTALS

Item # 05073 / #05074 **Instruction #00038**

Revised: 09/04/04

Directions for the proper use of a ninhydrin crystals for latent fingerprints processing

Ninhydrin is a widely used chemical for developing latent fingerprints on various kinds of paper, cardboard, raw wood, and plasterboard and in some instances, cloth with a tight weave. When latent
print residues are exposed to ninhydrin, they react to form a purplish-blue stain. The proper concentration and formula for a useable ninhydrin spray or dip is critical.

Ninhydrin works by reacting with amino acids and other components of perspiration residue that are present in latent fingerprints. As the chemical process progresses, a color image of the fingerprint is produced. The development of the image is not instantaneous; however, it can be accelerated using one of the techniques in procedures for use section.

There are several formulas available for mixing a ninhydrin solution.

Standard Ninhydrin Technique:

Reagents: Solvent……1 liter
Ninhydrin……10 grams

Note: Any of the following may be used as solvents for the ninhydrin solution.

Petroleum Ether*	***** **Flammable**
Ethyl Ether**	** Extremely flammable
Methanol*	
Ethanol*	
Acetone*	

The choice of solvent may depend on the type of evidence to be examined. For example, evidentiary items bearing writing which are to be preserved should be properly documented as some solvents may cause the ink to run.

Preparation: Dissolve 10 grams ninhydrin in one liter of solvent. Preparation of the solution may be hastened by using a magnetic stirrer. Mix the ninhydrin crystals in the solvent until completely dissolved, care must be taken not to heat the solutions, as they are flammable.
You should store the solution in a tightly capped container in a cupboard or cabinet. At room temperature, you can keep the ninhydrin solution for approximately one year.

Procedure: 1. Before beginning the procedure, make sure to photograph any visible fingerprints on the object or objects being studied.
2. The procedure involves dipping objects into the solution to wet the latent fingerprints. Large objects may need to be sprayed with the solution. In some cases, it may be necessary to use a soft brush to apply the solution to the object.
3. For objects to be dipped pour the solution into a shallow pan to a depth of about 20 mm. Use forceps to dip the object into the solution for no more than 5 seconds.
4. If the spray or brush procedure is used it is necessary to saturate the item with the ninhydrin solution.
5. Allow the object to dry completely at room temperature. It will only take a few seconds for the item to air dry.

Processing: **Use one of the below listed methods**
1. Lay item on a flat surface and using a steam iron; hold the iron approximately 1" above the surface. Slowly move the iron across the item. Development of latent prints should be instantaneous.
2. After the item is air dried, place item in an environmental chamber with the heat set at heat 80° F and relative humidity of about 80%. Do not use excessive heat.
3. Allow item to lay on tabletop or hang in cabinet for 24 to 48 hours. To develop any latent prints.
4. Photograph all latent prints to make a permanent record.

OTHER INFORMATION

The information contained in this product bulletin is the most accurate and up-to-date information available at the time of publication. The procedures and directions notes are believed to be correct-but this bulletin does not purport to be all-inclusive. It should be used only as a guide to normal use.

The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with this product.

Ninhydrin with Novec HFE-7100

Revised: 03/07/05

Mixing instructions for working solution of ninhydrin in Novec Engineered Fluid HFE-7100.

Important: Before mixing products, please read the current Material Safety Data Sheets (MSDS) and precautionary information on the product packages. Follow all applicable directions and precautions.

When measuring, transferring or dissolving components of the mixture, we recommend using indirect, vented chemical splash goggles to protect eyes from contact and natural rubber or polyvinylchloride gloves to prevent skin contact. Discard and reglove if components or mixture actually contact the gloves.

Use adequate ventilation and appropriate respiratory protection when mixing products. See MSDS for products being mixed for additional information

Use the procedure described below, substituting the proper amounts of each component for your respective working solution batch size.

	Standard Formulation	Sample Formulation
Ninhydrin	5 g	1 g
Absolute ethanol	45 ml	9 ml
ACS grade ethyl acetate	2 ml	0.5 ml
Laboratory grade, glacial acetic acid	5 ml	1 ml
Novec fluid HFE-7100	1 L (1000 ml)	200 ml

1. In a 250 ml beaker, dissolve 5 grams Ninhydrin crystals in 45 ml ethanol.
2. Add 2 ml ethyl acetate.
3. Add 5 ml acetic acid.
4. Continue mixing until all Ninhydrin has dissolved into solution.
5. Transfer this “stock solution” to a one liter beaker.
6. Stir in one liter of Novec fluid HFE-7100. Mix until a milky yellow solution is formed.

7. Cover and allow the solution to settle for approximately 30 minutes. A thin, oily looking film may form on the top of the solution. This film consists of water, excess ethanol and ninhydrin and must be removed prior to use. This film can be removed by any of the following procedures:
   d. If available, process the working solution through a **separatory funnel**. Again, allow the solution to settle for at least 30 minutes. Drain the bottom phase into a squirt bottle or storage container. Stop draining when the separate, clear-looking solution nears the bottom of the funnel, or approximately 50-100 ml of solution remains in the funnel. This remaining solution should be discarded in a proper waste container for flammable solvents as it consists of undissolved ethanol, water and ninhydrin.

   e. If a separatory funnel is not available, use a **pipette** to skim the oily film from the top, again discarding the waste in a proper waste receptacle.
   f. If neither a separatory funnel nor pipette is available, simply transfer the solution into a **squirt bottle.** This will help insure a clean solution. When the solution level is below the straw in the squirt bottle, discard the remaining solution in a proper waste receptacle.
8. When not is use, protect from direct light to preserve the shelf life of the solution.

OTHER INFORMATION

The information contained in this product bulletin is the most accurate and up-to-date information available at the time of publication. The procedures and directions notes are believed to be correct-but this bulletin does not purport to be all-inclusive. It should only be used as a guide to normal use.

The Lynn Peavey Company shall not be held liable for any damage resultingfrom the improper handling of or accidental contact with this product.

NITE-SITE™ KIT

Item # 05097, #06020 **Instruction # 00022**
Revised: 09/14/04

Directions for the proper use of Nite-Site™ (Luminol) as an aid in finding traces of blood.

The Nite-Site Kit contains a selection of chemicals and compounds that can be used to discover traces of blood and blood residue. When properly applied, the contents of the kit fluoresce blood heme by causing a controlled chemical reaction. Traces of heme are not easily removed from a crime scene and can usually be discovered. Nite-Site can be sprayed on virtually any type of surface. Use of this kit may not effect recovery or processing of PCR (polymerize chain reaction) or DNA (deoxyribonucleic acid) evidence.
Note: Nite-Site Kit does not differentiate between human and animal blood.

Constituents of the Nite-Site Kit

Container A contains a mixture of 5-amino-2, 3-dihydro-1, 4-pthalazinedione free acid (synonym: luminol) and sodium carbonate.
Container B contains sodium perborate tetrahydrate.

Preparation of chemicals

1. Do not prepare the chemicals of the Nite-Site Kit until you are ready to use. The fluorescing capabilities of the mixture erode quickly--until they become totally useless.

Note: You must use the kit within two or three hours after preparing the mixture.

2. Add distilled water to the powdered mixture in Container B. Add only enough to bring the fluid level up to the shoulder of the bottle. Then shake Container B for three minutes to ensure all of the powder has been dissolved.

3. Pour the contents of Container A into Container B. Then shake Container B for 30 seconds.

Procedure for Use

1. Prepare the mixture as detailed above.

2. Remove all available light from the area where you will be using the Nite-Site Kit to search for traces of blood. If the area is indoors, cover all windows and doors. If the area is out-of-doors, wait until nighttime to conduct the search. You need ***total darkness*** during the search procedure. (You can use a hand-held flashlight---but only for orientation purposes.)

3. Using the pump sprayer supplied with the Nite-Site Kit, spray the suspected area with a **light** mist until you have found specific areas or objects you want to preserve with photographs. Mark these areas so you can return to them later.

Note: the heme in blood traces will fluoresce in a purple-blue hue almost immediately after being sprayed. This fluorescence will fade away in about 30 seconds---so you must have a camera ready to photograph the evidence. Load the camera with ASA 400 film (color or black/white). Set the lens aperture to wide open (f1.2 or so). Set the shutter speed to "bulb". Use a tripod to steady the camera and use a cable release to trip the shutter.

4. Go back to each area or object you want to photograph. With the lights on, set up your tripod and camera.

5. Turn the lights off. Spray the target area with the Nite-Site mixture and trip the shutter, giving the photo an exposure time of 45 seconds.

6. After finishing the photography, allow the area or object to air-dry. Then secure the object in a Kraft evidence bag. Seal the bag with tamper indicating evidence tape and submit the evidence to the lab for analysis.

Wash contaminated clothing and shoes before reuse.

Other Information

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The Lynn Peavey Company shall not be held liable for any damage resultingfrom the improper handling of or accidental contact with this product.

Pathfinder™

Item # 09795 **Instruction #60052**
Revised: 06/03/05

Electrostatic Dustprint Lifter

The Pathfinder™ Electrostatic Dustprint Lifter is the most compact, easiest to use dustprint lifter available on the market today. It weighs only 8.6 oz., and its compact size (6" X 3" X 15") makes it great to take directly to the crime scene. It even comes with a handy carrying case that will slide right on your belt.

Its advanced design has totally eliminated the need for connecting wires of any type. It is powered by one standard 9-volt battery eliminating the hassle and downtime of recharging.

How it works:

Horizontal Surfaces

1) Photograph any visible dustprint, use side lighting to enhance the dustprints.
2) Place the dark side of the lifting film over dustprint or area to be processed.
3) Place the silver covered ground plate next to film leaving a space of approximately 1/8" between the lift film and the ground plate.
4) Place the Pathfinder down onto the ground plate and the film with two contact points touching the ground plate and the single contact point touching the lift film.
5) Turn on the power and increase the voltage to maximum. The film will adhere to the area.
6) Turn off the power after the film has completely adhered to the area.
7) Remove the Pathfinder from the film, lift the film off the area being tested.
8) Place the film with the dark side up on a flat surface.
9) Examine the film with side lighting to view the lift.
10) Photograph any visible dustprint, use side lighting to enhance the dustprints.

Vertical Surfaces

1) Photograph any visible dustprint, use side lighting to enhance the dustprints.
2) Apply small pieces of tape to the corners on the silver side of the film and place the film over dustprint or area to be processed with the silver side out and secured at the corners with the tape, to hold the film in place.
3) Tape the silver covered ground plate next to film leaving a space of approximately 1" between the lift film and the ground plate.
4) Place the Pathfinder down onto the ground plate and the film with two contact points touching the ground plate and the single contact point touching the lift film.
5) Turn on the power and increase the voltage to maximum. The film will adhere to the area.
6) Turn off the power after the film has completely adhered to the area.
7) Remove the Pathfinder from the film, lift the film off the area being tested.
8) Place the film with the dark side up on a flat surface.

9) Examine the film with side lighting to view the lift.
10) Photograph any visible dustprint, use side lighting to enhance the dustprints.

Transportation and Storage of Lift

The film has a static charge which holds the dust particles to it, with this in mind if the film is exposed to dust in the air it will be attracted to the film and could cover the developed print. It is recommended that the lift with the dust print be placed in a thin box and taped to the bottom and the properly secured to prevent dust from entering.

Peavey Print Pouch™

Item # 05479
Revised: 03/08/05

The Peavey Print Pouch™ is a single step system for developing latent fingerprints on a wide variety of surfaces. The pouch contains a specialized thixotropic blend of cyanoacrylate that emits invisible vapors that adhere to trace fingerprint residue.

Super Glue vapors react (polymerize) with waters and other possible fingerprint constituents to produce a white deposit on the fingerprint. Use on most non-porous surfaces such as plastic bags, glass, plastic, Styrofoam, rubber, vinyl, metal wax surfaces and some porous surfaces. Developed prints can be processed with powders and lifted or treated with fluorescent dyes. Once developed, photograph, powder and lift prints to document.

Procedure for Use

Processing in a fuming chamber:

1. Position item(s) to be processed in a completely enclosed chamber just large enough to accommodate item(s). Also, include a cup of warm water to increase interior humidity. The humidity inside the chamber needs to be approximately 80% for best fuming.
2. Open pouch at tabbed end to expose entire interior surface.
3. Attach opened pouch to chamber wall or let stand on end.
4. Fuming begins immediately and continues until the chemical is completely solidified. Inspect evidence after 15-30 minutes.

Processing rooms or vehicles:

Use the room or vehicle as a chamber itself. Strategically position 4-6 pouches per vehicle or one pouch per 10 sq. ft. per room. Close all doors, windows, seal vent and turn off ac/heater. Allow 2-4 hours for print development. Fully ventilate before entering.

Note: To monitor fuming progress on item(s) or in a room or vehicle, it is recommended that a test print be placed inside the chamber on a black backing card, zip lock bag or on the side of the chamber. Fuming is complete with test print is developed to your satisfaction.

It has been discovered that for best print development in a chamber, room or vehicle, a small fan should be placed inside. The use of the fan allows for better circulation of the fumes inside the chamber, room or vehicle.

Pop-N-Fume™

Item # 05475
Revised: 09/23/04

Instruction #00042

Kit contents

1-Complete framework
3-Evidence clips
15-Disposable bags
1-Base with rubber feet
1-Carrying pouch

A portable chamber with framework made for instant setup. The crystal clear bags are pre-printed with a test print area so you can constantly monitor the fuming process.

Assembly procedure and use

Remove the framework from the carrying pouch and allow the framework to snap together.

Place each leg into mounting holes in the base.

Slide one of the disposable bags over the framework so it lines up on the frame. Place a print on the inside of the plastic bag in the square marked test print.

Place item to be printed in the chamber, if the item needs to hang, use the evidence clips supplied to suspend it.

This chamber was designed for use with the HotShot™ fingerprint developer. The Pop-N-Fume™ works well with all field or laboratory procedures for fuming for latent prints.

Pull the bag down over the edge of the base for an airtight seal.

When fuming is complete properly dispose of the bag.

Post-Mortem Flip Kit™

Item # 10062
Revised: 10/11/04

Instruction #60022

1. Items included in kit:

10- Flip cards	125-Lifting tabs
1- Fiber Duster	1-Dual Use powder 2 oz.
10- Bags	10- Biohazard labels
10-Towelettes	

2. Inspect fingers for any contaminants.

3. Clean fingers with towelettes. (Make sure all evidence has been collected or photographed before swabbing with towelettes.) Allow to air dry before doing step 5.

4. Use one "flip" card. **FLIP IT OVER** viewing through the back. The lifting tabs will be attached to the **BACKSIDE** of the card.

5. Use the Fiber Duster and apply a minimal amount of power. Use a piece of paper to dab out excess powder. Brush one finger/thumb per lift and attempt to lift down to the second joint.

6. Peel off one lifting tab, holding onto paper edge.

7. Start systematically from left to right on the card, starting with #1 (R thumb) working to #5 (R little) then #6 (L thumb) to #10 (L little).

8. Place adhesive side of lifting tab onto the finger/thumb desired and gently press the tab into the friction ridge area. Peel off and insert into the designated box on the flip card (keeping the top of the lift in the upward position).

9. Once all lifts are completed, flip card over and inspect, using light for a background. Make sure the tops of all fingers are aligned properly and ridge detail is free from smears or contaminants which may hinder the identification process. Re-do steps 1-10 if necessary.

10. Cut off holding tabs on lifts.

11. Use a permanent marker and properly fill out top portion of "flip" card.

12. Package flip card inside bag, seal properly and secure as evidence. Place biohazard label on bag.

PRIVACY SCREEN

Item # 05979, #06979 **Instruction #00011**

Revised: 07/26/04

The Privacy Screen has been proven to be a sound method of protecting the privacy of victims and their families from onlooker seeing and photographing deceased victims. It also serves as a shield to prevent evidence from being blown off the victim and lost such as along roadways.

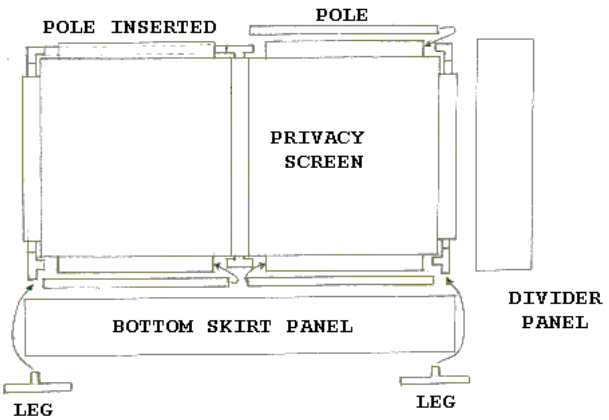
The Privacy Screen comes complete in a prepackaged form, in a handy carrying case, much like an elongated gym bag.

The kit contains; 3-screens 3' x 6' each, 12-poles, 6-legs, 4-snap on connectors, 3-bottom skirts and 2-divider skirts. The three screens can stand alone independent of each other or when put together can extend to 18'.

Assembly instructions:

1. Remove the rolled up screen from the Kit bag, and unroll. Remove 4 poles from the Kit bag and lay them along the longest sides of screen. (see diagram below)
2. Slide each pole into the pole pockets and into the appropriate fittings. The **top** and **bottom** orientation is determined by the fact that the bottom is where the legs mount (the 2 bottom corners have Tee's).
3. Place one leg, at each end, at the bottom corner of the screen. Stand at one end and lift the top of the screen to an upright position. The legs should be positioned at a 90 degree angle to the long side of the screen.
4. Repeat steps 1-3 with the remaining 2 screens.
5. Once all screens are assembled they may be arranged as required, such as L shaped, U shaped, end to end, stretched U shape, etc, etc. Use 2-snap on connectors to connect two screens together. Snap the connectors on the top and bottom of one side pole then snap to second screen. The legs at the ends that meet another screen may be turned at angles as not to interfere with each other.
6. Place the Divider skirts from top to bottom where the screens meet, and attach to the Velcro strips provided. Place the Bottom skirts along the bottom of each screen. The skirts may be washed if the become soiled.

Front View



ProLift™

Item #30024,#30025,#30026,#30027,#30028,#30029,#30030,#30031 **Instruction #60024**

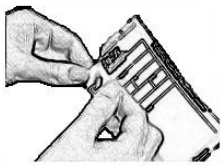
Revised: 11-30-04

Fingerprint Collection System

Latent Print Lifting With ProLift™
A Step By Step Guide

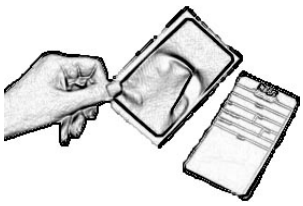
♦Step One
Separate layers from corner

1



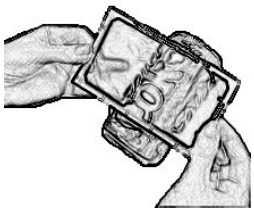
♦Step Two
Peel away sharply

2



♦Step Three
Holding the outside "frame" place adhesive side onto latent print

3

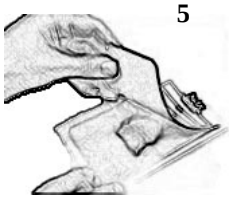


♦Step Four
Lift print away from surface holding frame making sure not to touch the sticky side of lifter

4

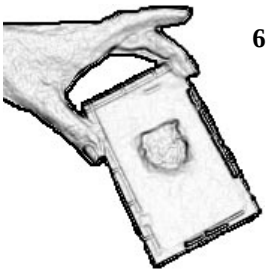
♦Step Five
Place adhesive part on flat surface (adhesive side up) and reapply record (placing information side up) product will be reversed now. Use cut corners to realign card accurately

5



♦Step Six
Smooth down surface to eliminate any wrinkles or air holes

6



♦Step Seven
Now fill in all the on-site information (must use ball point pen DO NOT use felt tip, or roller ball writers)

7

QuickCheck Bloodstain Green ™

Item # 10131
Revised: 12-2-10

Our QuickCheck line of products has been so successful; we've expanded the line to encompass a blood detection kit as well!

This kit contains 10 individual bloodstain tests that can immediately tell you whether or not a substance is blood.

Simply moisten a sterile swab with distilled water and rub it across the suspected stain. Break both ampoules; agitate to mix, then drop one or two drops on your swab with the provided applicator. If the sample is blood, the swab will instantly turn a bright blue/green.

Each kit includes a QuickCheck sleeve, swab and disposal bag.

RHODAMINE 6G

Item # 05081 **Instruction #00017**
Revised: 08/20/04

Directions for using Rhodamine 6G to fluoresce latent fingerprints after fuming items with Super Glue.

Rhodamine 6G is a solution that is typically used as a bath for latent prints that have been developed with Super Glue (cyanoacrylate). Most experts consider it to be one of the best alternate light source dyes on the market. A working solution of Rhodamine 6G can be used to dye the Super Glue residue that adheres to latent fingerprints on a item being studied.

Preparation of a stock solution

1. Mix a stock solution using the following formula:
   0.1 gram of Rhodamine 6G
   100 ml of methanol

2. Combine the ingredients in a large, airtight container. Stir until totally dissolved.

Preparation of a working solution

1. Mix a working solution using the following formula:
   3 ml of stock solution
   15 ml of acetone
   10 ml of acetonitrile
   15 ml of methanol
   32 ml of 2-propanol
   925 ml of petroleum ether

2. Combine the ingredients in the order listed. Use a large, airtight container. Stir carefully until totally dissolved.

Alternate formula:

While there is more than one formulation for mixing Rhodamine 6G, the simplest formula for a working solution is as follows:

0.1 gram Rhodamine 6G
2 Liters of carrier

The carrier can be either distilled water or a solvent such as methanol. With larger, powerful lasers, a more dilute solution may be more effective or with a small, portable unit, a less dilute solution could be better.

1. Combine the ingredients in a large, airtight container. Stir until totally dissolved.

Procedure for use

1. Prepare the working solution of your choice as detailed above. Note: Keep the lid of the container closed to prevent evaporation.

2. When ready to use, remove the lid and dip the item being studied into the solution and keep it there for several seconds. If the item is too large to submerge it in the container, pour the Rhodamine 6G solution over the surface of the item and let it set for several seconds.

3. Remove the item from the Rhodamine 6G solution and rinse it under a stream of gently running tap water.

4. To fluoresce the item, view it through colored goggles while exposing it to an alternate light source. You may have to experiment with different colored goggles and with light in various wavelengths before arriving at a suitable combination.

5. Photograph any latent fingerprints that are developed.

   To photograph the fluorescent-developed latent prints, duplicate the arrangement by which the best contrast was viewed with the eye. Use the wavelength, the color of viewing goggles and the angle of the light source to obtain the best photograph. Using a fine-grain black and white film with a medium f-stop ($f/8$ or $f/11$) will give a photograph showing highly defined ridge details. The ridges of the latent print will be white and the background will be dark in the resulting photograph.

   Storage: The stock and working solutions should be stored in dark bottles.

   Shelf Life: Stock solution: Indefinite
   Working solution: Up to six (6) months

Other Information

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The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with this product.

STANDARDS SEXUAL ASSUALT EVIDENCE COLLECTION KIT

Item # 05793
Revised: 11/15/04

Instruction # 00041

INSTRUCTIONS*

Please note that kit #05793 is a suspect kit of our larger victim kit #05790. The step numers listed here are the same step numbers that are stated on the envelopes in the kit.

1. **Use Step 7. Head Hair Sample**
   1. Pull 5 hairs each, do not cut, from all sides of head (center, front, back, left and right side);
   2. Place hairs on paper, refold and seal with small Integrity Seal;
   3. Return to envelope and seal with large Integrity Seal;
   4. Complete Suspect's Name, Date & Time Collected and Collected By information on front of envelope (substitute "Suspect's Name" for "Victim's Name")

2. **Use Step 9. Pubic Hair Samples**
   1. Pull 15-20 hairs, do not cut, from pubic area;
   2. Place on paper, refold and seal with small Integrity Seal;
   3. Return to envelope and seal with large Integrity Seal;
   4. Complete Suspect's Name, Date & Time Collected and Collected By information on front of envelope (substitute "Suspect's Name" for "Victim's Name")

3. **Use Step 10. Saliva Sample**
   1. **Have suspect** remove filter paper disk and chew on filter for several seconds to saturate with saliva;
   2. **Have suspect** place disk on paper provided;
   3. Allow disk to air dry. Then, without touching disk, wrap it in the paper;
   4. Place paper and disk in envelope;
   5. Seal envelope with Integrity Seal;
   6. Complete Suspect's Name, Date & Time Collected and Collected By information on front of envelope (substitute "Suspect's Name" for "Victim's Name")

4. **Use Step 14. Blood Sample**
   1. Use the enclosed purple top and red top tubes;
   2. Label each tube with suspect's name, date, time of collection and collectored by;
   3. Replace tubes in bubble wrap and seal;
   4. Place in bag provided and seal according to instructions;
   5. Place bag in envelope and seal with Integrity Seal;
   6. Complete Suspect's Name, Date & Time Collected and Collected By information on front of envelope (substitute "Suspect's Name" for "Victim's Name")

5. **Use Final Step**
   1. Remove the 2 red Box Security Seals from kit box.
   2. Return all envelopes to kit box and replace the lid.
   3. Place the 2 Security Seals on side of box where indicated and complete information on box top.

Sili-Cast™

Item # 05711
Revised: 08/19/04

Instruction # 00025

Directions for the use of Sili-Cast™

Sili-Cast is designed for those smaller, more detailed casts. By using Sili-Cast you will end up with a silicone-based mold that will withstand a lot of handling.

Contents:
1- 16 oz. Jar containing Sili-Cast
2- Tubes containing 2 cc of catalyst.

Each 16 oz. jar of Sili-Cast will cover an area of approximately 80 square inches.

Mixing procedure:
Separation of materials may occur, stir contents of jar before beginning.

To mix the entire 16 jar of Sili-Cast, add the 2 tubes of catalyst to the Sili-Cast.

To make up a smaller amount of Sili-Cast use a proportional amount of Sili-Cast to catalyst.

Example: For 8 oz. (1/2 container) of Sili-Cast use 1 tube of catalyst.
For 4 oz. (1/4 container) of a jar Sili-Cast use ½ of 1 tube of catalyst.

Mix thoroughly for approximately two (2) minutes.
Pour mixture over surface to be duplicated.
Allow the mold to cure.
Mold cures within 20 to 30 minutes. Temperature and humidity will determine the curing time.

SILVER NITRATE

Item # 05075 **Instruction # 00013**
Revised: 08/04/04

Directions for the use of Silver Nitrate to develop latent fingerprints

Silver Nitrate is a chemical that reacts with the chlorides or salts found in latent fingerprints. The chemical reaction changes the chlorides to silver chloride. Once the silver chlorides are exposed to a light source, the color changes to a dark gray. Silver nitrate is best-used on wood surfaces or paper products.

Preparing a 3% Solution

1. Measure out 100 ml of distilled water in a clean container.

2. Weigh out 3 grams of silver nitrate and add to distilled water.

3. Stir until a colorless solution is produced.

4. Store unused silver nitrate solution in an opaque container or in a dark container and store in a dark storage area. Silver nitrate is very light sensitive. Make sure the container is well labeled.

The following table lists the quantities of silver nitrate required for various percentage concentrations:

PO Box 14100 Lenexa, Ks. 66285 800-255-6499 Fax 913-495-6787 www.lynnpeavey.com

Volume of distilled water	Percentage Concentration				
	1.0%	2.0%	3.0%	4.0%	5.0%
100 ml	1.00 g	2.00 g	3.00 g	4.00 g	5.00 g
1 pint	4.73 g	9.46 g	14.19 g	18.92 g	23.65 g
1 quart	9.46 g	18.92 g	23.38 g	37.84 g	47.30 g
1 liter	10.00 g	20.00 g	30.00 g	40.00 g	50.00 g
1 gallon	37.85 g	75.70 g	113.55 g	151.40 g	189.25 g

Procedure for Use

1. Pour enough silver nitrate into a clean, dry glass dish to cover the object in question.

2. Place the object in the solution long enough to get it thoroughly saturated.

3. Place the object in a dark area and allow to completely dry

4. Illuminate the object with a 500-watt photoflood lamp. The object should be placed about 500 mm from the light source.

5. Store the object in a dark area while you are waiting for it to be photographed.

   Note: The background will continue to develop if the object is stored in the light.

Other Information

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Stati-Lift™

Item # 05170
Revised: 09/23/04

Instruction # 51704

Stati-Lift™ Dust Print Lifter

General Information

The Stati-Lift System was developed as a result of the need for lifting and preserving dust print evidence…affordably. In the past, a method that worked with lifting dust prints was known as "electrostatic dust print lifter", but that method is very expensive. The Stati-Lift System works on a similar principal - simple static electricity. While the electrostatic dust print lifter uses a separate mechanical device to "charge" the film with electricity, the Stati-Lift uses the static electricity that is built up in separating the special liner from the film itself.

Use the Stati-Lift System whenever a dusty shoe print or tire track (or similar impression) is found. This system should work on virtually any surface, with the exception of extremely porous surfaces (like rough concrete) or on carpeted areas. Lifting with the Stati-Lift Lifters works best on dust print impressions on paper, cardboard, plastic, metal, glass, linoleum and other non-porous surfaces. Be sure to **PHOTOGRAPH FIRST,** then attempt your lift as with any method.

Instructions for use

1. Locate the dust print first through strong side lighting. A quality flashlight does well. One method is to place your flashlight on the floor (or surface to be examined) and roll it slowly back and forth until you can detect a dust print.

2. Photograph the illuminated dust print as well as possible.

3. Take the black sided (as opposed to the "shiny" side) lifter face up and grasp the small plastic tabs in both hands. Peel the clear protective liner away from the black lifting surface. **(See figure 1)**

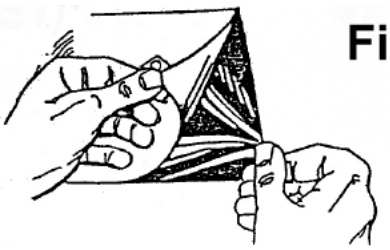

Fig. 1

4. With the clear liner pulled completely back, carefully place the black side over the dust print you wish to lift, leaving the "shiny" side facing up. **(See figure 2)**

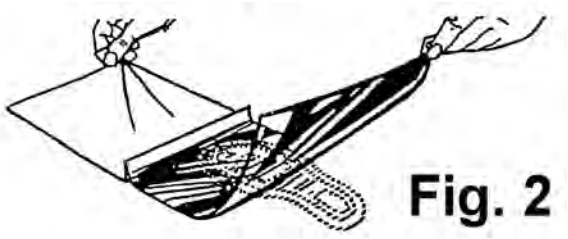

Fig. 2

5. Make sure you do not move the Stati-Lift once it is placed down on the print, press out all air bubbles, streaks, etc., then lift somewhat like lifting tape (although there is no adhesive). Carefully replace the clear protective liner over the print.

6. Complete pertinent information on the supplied label.

Note: For viewing your lift you may need to look at the Stati-Lift under a sidelight. While holding the label portion in the air with the black side facing you, shine your flashlight directly under the Stati-Lift allowing the light to pass across the surface. Any dust print should reveal itself, if lifted.

Taking a suspect's footwear impression

1. Obtain a sample of the suspect's footwear and place a small amount of white fingerprint powder or talcum powder across the entire bottom of the shoe. (Brushing it on with a fiber duster brush works best)

2. With the protective liner already peeled back from the Stati-Lift, place the shoe with the powder directly onto the Stati-Lift surface. Carefully lift the shoe and replace the protective covering over the white image.

3. For the other shoe repeat steps 1-2.

THEFT DETECTION POWDER

Item # 05103 **Instruction #60047**
Revised: 09/13/04

PO Box 14100 Lenexa, Ks. 66285 800-255-6499 Fax 913-495-6787 www.lynnpeavey.com

Theft Detection Powder is designed to be used when you suspect someone may be stealing or tampering with property.

NOTE: You will need a feather brush to apply the Theft Detection Powder and an alternate light source such as the Micro-Blue, Blue-Light Special or a UV light source to view the powder on the suspect's hands.

Theft Detection Powder use:

1. Lightly touch the feather brush to the Theft Detection Powder.

2. Lightly dust the item you wish to use as the bait.

3. Check the surface you just dusted with the light source to make sure it is covered. The surface will fluoresce.

Viewing results:

1. After you know that the item has been touched, moved or taken, you can check the hands of possible individuals involved.

2. Shine the alternate light source on the individuals hands and if he or she touched the item you will observe a fluorescent red on their hands.

Note: This powder is not meant to "stain" and therefore, must be evaluated with a light source fairly soon after touching.

This product can be cleaned up with soap and water.

ThermaNin

Item # 15096 **Instruction #60178**
Revised: 10-6-2008

Directions for the proper use of ThermaNin crystals for latent fingerprint processing

ThermaNin is used for processing for latent fingerprints on thermal paper which is used in retail shops, supermarkets and other printers for point-of-sales transactions. Thermal paper turns black on application of heat (as in the printer) and with polar solvents like alcohols, acetone, ether, ethyl acetate, etc. These are the regular solutions for ninhydrin and DFO. These solutions have a detrimental effect on thermal paper: on application the paper surface turns dark grey or black thereby obscuring any fingerprints that may subsequently develop.

ThermaNin will not develop any fingerprints by itself. The process relies on the fact that after application of its solution to paper, ThermaNin will readily convert to ninhydrin and the alcohol upon contact with water present in the paper or in the atmosphere. This conversion can be detected from the weak odor of the alcohol that will be given off by the paper afterwards. The ninhydrin will then be available to react with any fingerprint residue in the paper. The ninhydrin will not dissolve in petroleum ether, so the paper can be dipped twice (with a certain waiting time in between, to allow for the conversion of the ninhydrin hemiketal to ninhydrin and alcohol) to increase the ninhydrin concentration in the paper.

The prints developed will be purple in color as they are when processed with ninhydrin.

Stable working solution:

Reagents:

4-5 g	ThermaNin crystals
5 mL	Isopropanol
15 mL	Ethyl acetate (optional for petroleum ether/heptane based solutions)
980 mL	Petroleum ether (60-80 degrees), heptane, or HFE-7100
_____	
1000 mL working solution	

Preparation: Dissolve 4 grams of ThermaNin crystals in petroleum ether/pentane or heptane by shaking (for 5-10 minutes). Slight warming of the solution (till around 30-40 degrees C) will aid the dissolution of the ThermaNin crystals considerably. Adding 0.5 ml of isopropanol (and optionally 1.5 ml of ethyl acetate) per 100 ml of solution helps also. ThermaNin cannot be made in HFE-7100 alone.

A working solution should be used within 1-3 weeks.

The working solution should be stored in plastic or aluminum containers, but preferably aluminum.

If stored in glass bottles the shelf life of the working solution is drastically shortened.

A smaller Working Solution

Reagents:

0.4 to 0.5 gram	ThermaNin
0.5 mL	Isopropanol
1.5 mL	Ethyl Acetate
	HFE-1700
100 mL	

Preparation: In a 100 mL bottle (glass or aluminum) add the ThermaNin, Isopropanol and Ethyl Acetate. Dilute with the HFE-1700 to equal 100 mL.

Procedures and Processing for both solutions:

Procedure:

1. Before beginning the procedure, make sure to photograph any visible fingerprints on the object or objects being studied.
2. The procedure involves dipping objects into the solution to wet the latent fingerprints.
3. For objects to be dipped pour the solution into a shallow pan to a depth of about 20 mm. Use forceps to dip the object into the solution until the item is saturated with the solution.

Processing:

1. Lay item on a flat surface at room temperature, in the dark and elevated humidity (around 80% is preferred).
2. ***DO NOT*** use heat as an accelerant; this will only turn the paper black, covering any latent fingerprints.
3. Because of the sensitivity of the paper for polar solvents, treatment of the thermal paper with zinc chloride is not an option either.
4. Photograph all latent prints to make a permanent record.

OTHER INFORMATION

The information contained in this product bulletin is the most accurate and up-to-date information available at the time of publication. The procedures and directions notes are believed to be correct-but this bulletin does not purport to be all-inclusive. It should be used only as a guide to normal use.

The Lynn Peavey Company shall not be held liable for any damage resulting from the improper handling of or accidental contact with this product.

Third Hand™

Item # 95164
Revised: 01/24/05

Instruction #60113

The Third Hand™ is designed to allow the handling of most standard size bottles an is the solution for picking up, examining and processing various bottles for DNA and fingerprints found at crime scenes.

Place the Third Hand in the top of the bottle by firmly pushing straight down for a firm fit. The Third Hand will keep any liquid in the bottle from spilling out. The Third Hand can be left in the bottle for transportation to the crime lab.

To remove the Third Hand from the bottle when processing is completed, firmly hold on the bottle and rock the Third Hand side to side while pulling it up.

Note: Caution must be used when removing the Third Hand from a bottle that has a carbonated liquid inside. If the bottle is shaken or turned upside down, pressure may build up inside the bottle. Firmly hold onto the Third Hand when removing, and do not aim it at anyone.

Trace Evidence Mat™

Item # 95048 **Instruction #60019**

Revised: 03/21/2005

Instructions for Use

The Trace Evidence Mat™ is a sticky sheet that can be placed outside a crime scene for law enforcement personnel to step onto when entering and exiting a crime scene. This transfers any trace evidence from persons shoes to the collection mat.

The following procedures should be used to effectively collect evidence:

1. **Place the collection mat directly outside the primary entrance/exit to a crime scene. The paper strips should be removed, placing the sticky strips down securely by pressing the edges of the mat. Rub the adhesive area outward with both thumbs working from the top edge to the bottom of the mat.**

2. **Remove the cover sheet from the Trace Evidence Mat. Be sure to save the paper covering over the adhesive areas to recover the areas after the evidence has been collected.**

3. Evidence is best collected by having each person who enters/exits the scene place both feet on the mat for collection. Each foot should be slowly lifted separately by rocking from the heel to the toe before stepping off the mat.

4. It is best to use a different mat to collect trace evidence as you exit the scene.

5. After evidence has been collected, place the cover sheet over the sticky collection area before peeling the mat from the floor.

6. Fold the Trace Evidence Mat in half, cover side out, so that both sticky strips meet.

7. Evidence should be handled according to your departments' procedures.

The Trace Evidence Mat collection mat can also be used as a disrobing mat for rape victims, to collect foot impressions or tire impressions.

WET PRINT

Item #05680,#05696,#09719,#09723,#05682 **Instruction #60053**
Revised: 01/14/05

Wet Print is like liquid fingerprint powder. When sprayed on the surface of non-porous wet evidence, the micro fine particles attach themselves to the latent print residues as the solution runs off the surface. The residue is sprayed with water to remove excess and when dry the developed latent fingerprints can be lifted with lifting tape.
Potential Uses:

1. Processing non-porous items covered with water or snow.
2. Developing latent prints on non-porous items that have been lightly washed.
3. Processing items in situations where mud, dirt, or heavy dust have covered prints making them impossible to develop by conventional means.

General comments for optimum results:

1. Objects should be as close to room temperature (70°F) as possible.

2. Wet Print 1 and 2 used as spray should also be at 70°F.

3. Always use a fine mist soft mist when spraying.

4. Wet Print dries silver on dark objects and dark on light colored objects.

For optimum results:

Always use a fine, soft mist when spraying.

Small particle reagent dries silver on dark objects and dark on light-colored objects and is available in white also.

Instructions for use

Wet objects:

1. Be sure spray nozzle is in “off” positions before shaking and after using to prevent it from leaking.
2. Shake Wet Print reagent container to disperse solids. This needs to be done frequently during the spraying process because the particle reagent is heavier than the water and will settle to the bottom of the spray container.
3. Adjust spray nozzle for a fine soft spray and test the spray before applying.
4. Spray Wet Print reagent onto the wet surface allowing the agent to roll down and spread over the suspected fingerprint area. It is best to start at the top and work to the bottom of the item.

5. Spray area with clear water to wash off the excess small particle reagent to view the developed prints.
6. If needed, repeat steps 4 and 5 until print is completely developed.
7. If details in the print appear to be clogged with residual small particle reagent, spray a fine mist of clear water over the developed latent fingerprint.
8. Once prints are fully developed, photograph and either let dry or lift wet by placing the lifting tape onto the print and working from the center out. Press the tape down to remove excess water. Place tape on backing card and again press the tape down toremove any excess water.
9. Dried print then may be re-photographed and lifted.

Dry objects:

1. Be sure spray nozzle is in the "off" position before shaking and after using to prevent leaking.
2. Shake small particle reagent container to disperse solids. This needs to be done frrequently during the spraying porcess because the particle reagent is heavier than the water and will settle to the bottom of the spray container.
3. Adjust spray nozzle for a fine, soft spray and test the spray before applying. If item is particularly dirty, spray with a fine mist of water until all dirt washes away. Do not wipe suspected fingerprint area.
4. **PROCEED WITH PROCESSING FOLLOWING STEPS 4 THOUGH 9 THAT ARE LISTED ABOVE FOR WET OBJECTS.**

Other Information

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